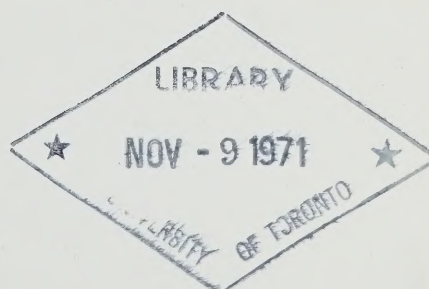


# India



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*Foreign market study*



FOREIGN MARKET DEVELOPMENT SECTION

RESEARCH BRANCH

TRADE AND INDUSTRY DIVISION

ONTARIO DEPARTMENT OF TRADE AND DEVELOPMENT



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## FOREIGN MARKET STUDY

### INDIA

1. An attachment to Foreign Market Study on India, prepared by  
the F.M.D. Section.

In our present study on Foreign Market Study, India occupies a prominent  
place. It is a large country with population, according to the  
most available statistics, around 400 million last March 1971.  
It is growing at about 1.5 million people a year - a rate which will  
be maintained, with India's estimated population of 4 billion by  
1980 or 1985.

The general economic trend in India, particularly at objective in the  
last decade where development of Indian national resources, together  
with the geographical position and the human resources in skilled  
labor and developing technology, will make India an industrial  
power and an important factor in world trade.

From a small state two decades ago, India today stands as the  
world's second largest industrial country. Foreign aid has played  
an important role in this development but India has achieved the  
majority of its economic growth through her own resources and  
efforts. There is every indication that India is making  
a rapid headway towards a more stable and viable economy.

India's export sector occupies a small proportion of its  
economy, about 10%, but is nevertheless an important  
factor in its economic development. India's export  
performance for the period 1960-1970 is shown in Table 1.  
The table shows that India's exports have increased by 100% in  
the last decade.

#### Prepared by:

Foreign Market Development Section  
Research Branch  
950 Yonge Street  
Toronto 5, Ontario

YCP  
September 1971







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DEPARTMENT OF  
TRADE AND DEVELOPMENT

950 YONGE STREET  
TORONTO 5,  
CANADA

November 3, 1971

Mr. D. Smith  
Serials Department  
University of Toronto  
Toronto 180, Ontario

Dear Mr. Smith:

I am attaching a Foreign Market Study on India, prepared by  
Mr. Y. C. Pan.

In our export drive to South-East Asia, India occupies a prominent place. It is a huge country, whose population, according to the best available estimates, passed the 550 million mark during 1970. It is growing by about 14 million people a year - a rate which will, if sustained, give India an estimated population of a billion by 1990 or 1995.

The present economic trend in India, envisages an objective in the next decade where development of Indian natural resources, combined with its geographical position and huge human resources in skilled labor and developing technology, will make India an industrial power and an important factor in world trade.

From a modest base two decades ago, India today stands as the world's tenth largest industrial country. Foreign aid has played an important role in this development but India has achieved its greatest gains in economic growth, through her own resources and self-help efforts. There is every indication that India is making substantial headway towards a more stable and viable economy.

Although India's export sector constitutes a small proportion of its total national income, about 5%, it is nevertheless an important factor in financing Indian economic development. India's export performance for the financial year which ended in March 1971, shows dramatic improvement. A major share of this improvement is its increase in jute exports, since competition from East Pakistan has lessened.

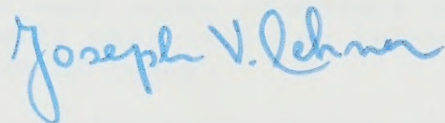
As for imports, there is a strong indication that India will import more in the current five-year period, than was the case during past Five-Year Plans. Planned investment in new plants and up-to-dating existing factories, should open up real opportunities for Ontario and Canadian exporters.

India is presently making a concerted effort to reduce its traditional dependence of foreign aid. However, India's debt repayments and servicing charges during 1971-1972 are expected to reach a record level of \$610 million, and unless adequate relief is granted, the net inflow of aid will be negligible. The East Bengal refugee problem has also placed an unexpectedly heavy burden on India which India cannot possibly support without the help of the international community.

India has greatly restricted foreign partnerships except on a very selective basis, where the need is to bridge vital production gaps which can only be filled with the aid of know-how and sophisticated equipment from abroad. It has developed major indigenous industries which are today increasingly export-minded. Today, India is an exporter of a wide range of manufactured products.

Despite the limitations on penetration of the Indian market, India is still an attractive market. Ontario exports of \$14 million (1970) to India are not relative to Indian market potential. The increasing non-aid imports of industrial raw materials, machinery and equipment offer us opportunities to increase our share of exports to India.

Yours very truly,




Joseph V. Lehner  
Chief  
Foreign Market Development Section  
Research Branch

JVL/jm  
Att.



## F O R E W O R D

Export marketing research is a subject of considerable interest to our Department, to Ontario manufacturers and to businessmen who may be interested in exports. The Foreign Market Studies which are undertaken by our Section, are written for the use of our Trade and Industry Division, and specifically by our Marketing Branch and Trade Mission members. These studies depict the economic background of the countries that will be visited. For this reason our Foreign Market Studies are, in the first instance, working documents designed for the use of the Department and cannot be taken in their entirety as expressing the opinion or position of the Department of Trade and Development.



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# Equivalents of metric, Imperial and U.S. units of measure

Metric Units		Imperial and U.S. Equivalents		Imperial and U.S. Units		Metric Equivalents
<u>Length -</u>						
1 centimetre (cm).....		0.394	inch	1 inch.....		2.540 cm
1 metre (m).....	{	3.281	feet	1 foot.....		30.480 cm
	{	1.094	yard	1 yard.....		0.914 m
1 kilometre (km).....	{	0.621	mile	1 mile.....		1609.344 m
	{	0.539	int. naut. mile	1 International nautical mile.....		1852.000 m
<u>Area -</u>						
1 square centimetre - cm <sup>2</sup> ..		0.155	square inch	1 square inch.....		6.451 cm <sup>2</sup>
1 square metre - m <sup>2</sup> .....	{	10.764	square feet	1 square foot.....		9.290 dm <sup>2</sup>
	{	1.196	square yard	1 square yard.....		0.836 m <sup>2</sup>
1 hectare - ha.....		2.471	acres	1 acre.....		0.405 ha
1 square kilometre - km <sup>2</sup> ...		0.386	square mile	1 square mile.....		2.589 km <sup>2</sup>
<u>Volume -</u>						
1 cubic centimetre - cm <sup>3</sup> ...		0.061	cubic inch	1 cubic inch.....		16.387 cm <sup>3</sup>
1 cubic metre - m <sup>3</sup> .....	{	35.315	cubic feet	1 cubic foot.....		28.317 dm <sup>3</sup>
	{	1.308	cubic yard	1 cubic yard.....		0.765 m <sup>3</sup>
<u>Capacity -</u>						
1 litre (L).....	{	0.879	Imp. quart	1 Imperial British quart.....		1.136 L
	{	1.057	U.S. liq. quart	1 U.S. liquid quart.....		0.946 L
	{	0.908	U.S. dry quart	1 U.S. dry quart.....		1.101 L
	{	21.997	Imp. gallons	1 Imperial gallon.....		4.546 L
	{	26.417	U.S. gallons	1 U.S. gallon.....		3.785 L
1 hectolitre (HL).....	{	2.749	Imp. bushels	1 Imperial bushel.....		36.369 L
	{	2.838	U.S. bushels	1 U.S. bushel.....		35.239 L
<u>Weight or Mass -</u>						
1 kilogramme (kg).....	{	35.274	av. ounces	1 av. ounce.....		28.349 g
	{	32.151	troy ounces	1 troy ounce.....		31.103 g
	{	2.205	av. pounds	1 av. pound.....		453.592 g
	{			1 centerweight (100 lb.).....		45.359 kg
	{			1 hundredweight (112 lb.).....		50.802 kg
	{			1 short ton.....		907.185 kg
1 ton - .....	{	1.102	short tons	1 short ton.....		0.907 t
	{	0.984	long tons	1 long ton.....		1.016 t

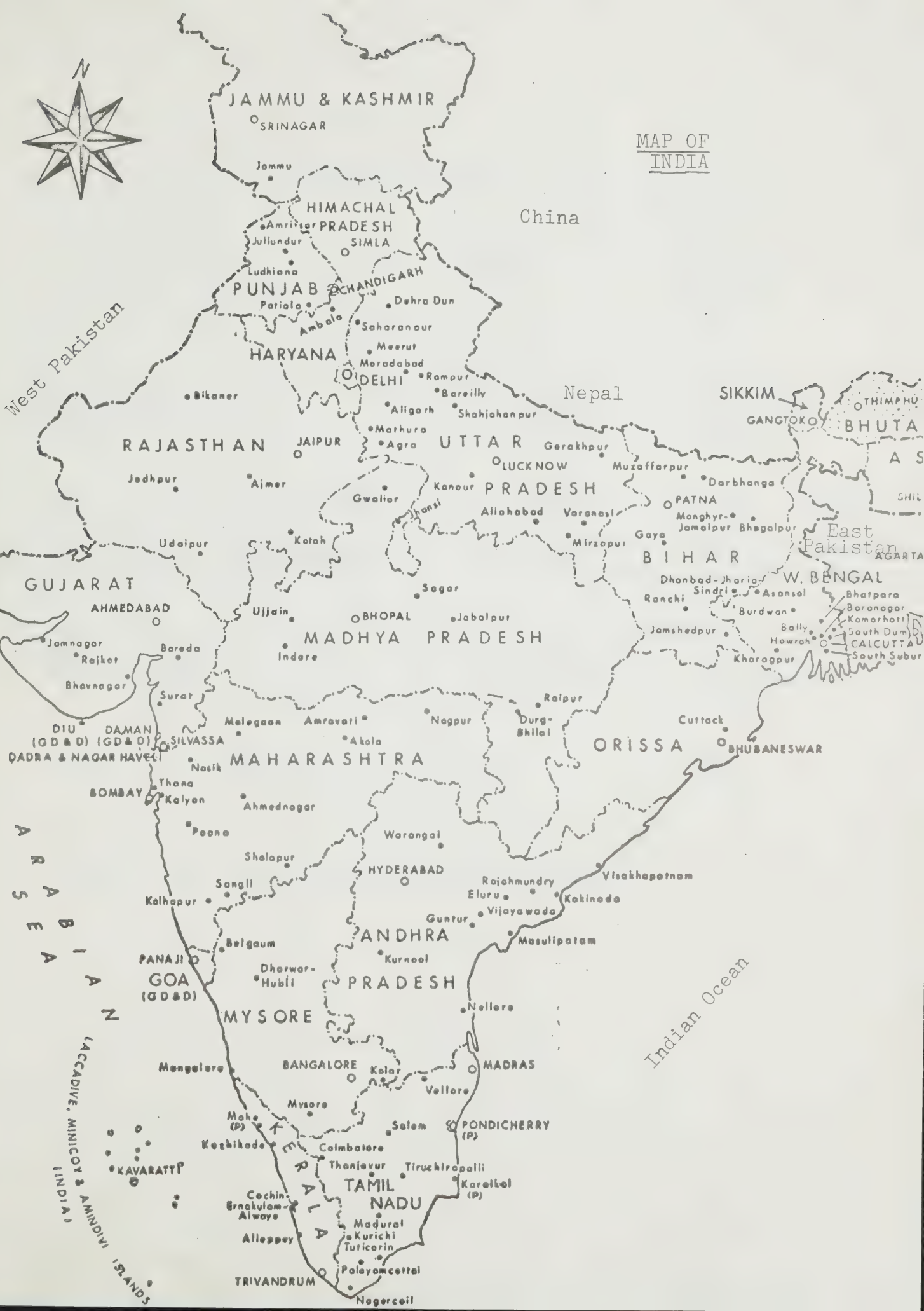


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MARKET INDICATORS

	<u>CANADA</u>	<u>INDIA</u>
1. Population (1969) million	21.1	537.0
2. GNP (1969) (\$ billion)	78	40.7*
3. Passenger cars	6.2 million	376,000
Telephones in use	8.4 million	1 million
TV Sets	7.3 million	6,000
4. Iron and steel (million tons)	10 (1969)	12.3 (1968)
Cement (million tons)	7.4 (1969)	11.5 (1968)
Electricity Production		
(billion KWH)	190 (1969)	36.4 (1968)
Motor vehicles production	1.3 million (1969)	69,500 (1968)
5. Trade		
Export (1969)	\$15.0 billion	\$1.8 billion
Imports (1969)	\$14.2 billion	\$2.1 billion
Imports per capita	\$675.00	\$3.91
6. International liquidity		
(\$ Million) (1969)	1,756	682

\* Source: IMF: International Financial Statistics



INTRODUCTION

India is one of the largest countries in the world in terms of land area and population. Its economy is currently enjoying a recovery and a steady growth of about 6% per year. In 1969, India's national income was \$40.7 billion, and the national budgetary expenditure for the period of the Fourth Five-Year Plan (1969/70 & 1974/75) is set at \$35.9 billion.

The Indian economy is also undergoing significant changes in its structure: a great emphasis on increased agricultural self sufficiency and industrial development commensurate with the basic structure of the nation's economy is gradually showing signs of success. This state of affairs is also reflected in the pattern of India's foreign trade. Great demand exists in fertilizers, agricultural and industrial machines for light industries, transportation equipment, electrical appliances and power stations.

India's trade amounted to about \$4 billion in 1969 (\$1,819.3 million of exports and \$2,028.2 million of imports). This represents 9.4% of India's national income. International competition to secure the Indian market for various capital goods is very keen, and Canada and Ontario are also in the position to take advantage of the opportunity to export the items that are briefly outlined above. India's industrial pattern, trend of industrial development and import potentials will be discussed in full detail in the following text.





## GENERAL INFORMATION

### 1. Geography and Climate

The Republic of India occupies the bulk of the Indian subcontinent. Few areas of the world are so clearly demarcated: to the north, it is bounded by an enclosing mountain wall, and to the south, east and west, by the sea.\* The geographic features of the subcontinent can be summarized as follows:

1. The encircling mountains of the Himalayas and associated Alpine ranges in the north;
2. The Indo-Gangetic Plain, a great lowland with rivers, paralleling the mountain range, stretching more than 2,000 miles between the Arabian Gulf and the Bay of Bengal, with an average width of 150-200 miles. The main deltas in this region are the Indus River and the Ganges-Brakmaputra River deltas.
3. The great plateau block of the peninsular portion (The Deccan Plateau) lying south of the lowlands.

The area of the Indian Union (excluding Jammu and Kashmir) is 1,178,995 square miles. Two monsoons bring varying sets of weather conditions to the sub-continent; the dry north-east monsoon results in the cool season of January-February and the hot season of March-June, and wet southwest monsoon brings the rainy season from mid-June to mid-September as well as the retreating monsoon rains from mid-September to December. In terms of rainfall, the sub-continent exhibits incredible range - from as little as five inches to as much as 450 inches (in Cherrapunji in Assam, probably the wettest spot in the world). The rainfall varies greatly from year to year. This has especially important implications for areas with 20-40 inches of annual rainfall, for crop growth is virtually dependent on rain: disastrous famines have occurred because of lack of rainfall. It is interesting to note that the "famine belt" is not the driest area as might be expected but rather those with intermediate rainfall.

Temperatures range from 58 degrees F. in winter to 105 degrees F. in summer.

### 2. Human Resources

The total Indian population was 536 million people (1969).

There is no generally accepted racial classification for the sub-continent. In a broad fashion, five distinct racial types inhabit this area: The Aryans, the Dravidians, the Negritos, the proto-Australoids, and finally, the Mongols.

\*The states sharing borders with India are shown in the map at the beginning.





Consequently, India has a multitude of languages, and unification of language is now a major political issue. There are four principal language groups in the sub-continent: (1) the Indo-Aryan languages, such as Hindi, Bengali, Marathi, Gujarati, Punjabi, etc., spoken by 350 million people; (2) the Dravidian languages, spoken by over 90 million people; (3) the Tibeto-Chinese languages spoken by relatively few people, usually less than 100,000 people per dialect; and (4) the Austro-Asiatic languages spoken by about five million people in the hinterlands. The official language is Hindi, but the use of English is authorized by the Official Languages Amendment Act of 1967 for all official and commercial purposes.

The caste system, long-entrenched and a principal obstacle to progress in India's social structure, has been formally abolished. However, social disparity is still extremely pronounced between the landed aristocracy and the poor. A series of reforms have been implemented, including the abolition of the Zamindari tenure, where large estates were owned by a few persons, and tenants were employed through intermediaries. This system prevailed in about 43% of the country, but was abolished in 1958, usually in favour of the Ryotwari tenure system, or peasant-proprietor system. As a result, some progress was made in enabling greater labour mobility and equalization of land ownership. But these reforms have some loopholes, as will be described briefly in the section dealing with agriculture.

Of India's total employment of nearly 200 million people, over 60% are employed in agriculture. As a result of improvements in agricultural and productive technique, there is an increase in the demand for labour. However, unemployment is still very serious; the ratio is about 15% of the total labour force. In some areas, the situation is serious, as the dispossessed small land owners and peasants increase in number, and sporadic riotings take place.

### 3. Constitution and Government

India is a union of states, comprising 17 states and 10 union territories. Each state is administered by a governor who is appointed by the President for a five year term and each union territory is administered by the President through an administrator appointed by him.

- (1) The Parliament of the union consists of the Council of States (the Upper House) and the House of the People (the Lower House). The representatives to the Upper House are indirectly elected through State Legislature. The Lower House consists of not more than 500 members,



who are elected by direct vote on the basis of adult suffrage, and unless dissolved sooner, has a mandate for five years. The Upper House is not subject to dissolution, but one-third of its members retire every second year.

The State Legislature consists of the Governor, two Houses, a Legislative Assembly and a Legislative Council in some states, and One House and a Legislative Assembly in others.

- (2) The Congress Party has been in power since India obtained its independence, and the recent re-election of the party and its Prime Minister, Mrs. Andira Gandhi, has assured India of another few years of Congress Party Rule.





## STRUCTURE OF THE ECONOMY

### 1. General

The Indian economy is now experiencing an annual G.N.P. increase of about 6%, after the economic stagnation which had afflicted the nation since 1966. The 4th Five-year Plan\*, implemented in draft form since 1969 and finalized in 1970, sets a growth target of 5½% per annum, calls for an expenditure of about Rs252 billion (\$35.9 billion) and emphasizes a shift in investment from the private to the public sector. This is expected to lead to a budget deficit of about Rs.2,250 million (\$320.5 million) for 1970-71. The country's trade deficit is its lowest in 14 years, but inflation is causing a great deal of concern.

The largest sector in the economy, agriculture, is expanding rapidly. The production of food grains is expected to increase by 50% in the six years up to 1975, mainly because of improved rice and wheat seeds and increased use of fertilizer. It is hoped that India may be able to dispense with a large part of the imports of cereals in the near future. However, India is far from self sufficient in over-all grain production.

Irrigation is far from adequate and only about 20% of the farms are irrigated; but under the 4th plan, a massive increase in the number of tubewells is contemplated. Improved profitability, coupled with the inability of small landowners to obtain either the capital or expertise for such improvements, is resulting in further concentration of land holdings, and profits in fewer hands.

Jute and tea, which account for about 14% and 8% respectively of India's foreign exchange earnings, are meeting with strong international competition and declining demand. Growing labour unrest, high wage increases, and government controls have brought tea plantations to the brink of bankruptcy, and there is a threat of nationalization in some states. To stimulate exports of tea, an export tax on tea was abolished, and under certain conditions, excise duty was made refundable.

By contrast, industrial production increased by nearly 8% in 1969. Heavy industry and the manufacturing sector both expanded, though the output of capital goods remained static.

\* India has had a number of economic plans, as shown below:

1. The First 5-year plan: 1951/52 to 1955/56
2. The Second 5-year plan: 1956/57 to 1960/61
3. The Third 5-year plan: 1961/62 to 1965/66
4. The Annual Plans: 1966/67, 1967/68, 1968/69
5. The Fourth 5-year plan: 1969/70 to 1974/75



India's national income was 308 billion rupees in 1969 (\$40.7 billion). For a country with a population of 536 million people, this amounts to less than \$75.00 per person. Government expenditure, exclusive of investment in capital stock, was about 9% of aggregate consumption, while private consumption absorbed 73% of the total. The remainder is public and private investments, and trade. Gross capital formation reached the peak in 1966, amounting to 16.3% of G.N.P. The goal is to attain a gross capital formation which is close to 25% of G.N.P. Contrary to popularly held opinion, the Indian economy is largely private: total government participation in the economy, including both consumption and investment, accounts for only about 12% of G.N.P. However, it is significant that the contribution of the public sector in the capital formation of India is about one-third, a proportion relatively larger than the contribution made by the private sector, considering the relative magnitude of expenditures. Contributions of various sectors to the Net Domestic Product of India are shown below:

NATIONAL INCOME BY INDUSTRIAL ORIGIN  
(Revised Series)

(Rs. crores)

Industry	1960-61	1962-63	1963-64	1964-65	1965-66*	1966-67*	1967-68*
Agriculture .. ..	6,571 (49.1)	6,906 (46.0)	8,018 (46.5)	9,845 (48.7)	9,435 (45.3)	11,701 (47.3)	14,480 (51.4)
Forestry and logging	174 (1.3)	206 (1.4)	247 (1.4)	260 (1.3)	287 (1.4)	317 (1.3)	344 (1.2)
Fishing .. ..	77 (0.6)	86 (0.6)	95 (0.6)	108 (0.5)	124 (0.6)	137 (0.6)	149 (0.5)
Sub-Total .. ..	6,822 (51.0)	7,198 (48.0)	8,360 (48.5)	10,213 (50.5)	9,846 (47.5)	11,755 (49.2)	14,973 (53.1)
Mining and quarrying	144 (1.1)	178 (1.2)	204 (1.2)	204 (1.0)	234 (1.1)	252 (1.1)	283 (1.0)
Large-scale manufacturing	1,071 (8.0)	1,228 (8.6)	1,518 (8.8)	1,686 (8.3)	1,822 (8.8)	2,014 (8.4)	2,050 (7.3)
Small-scale manufacturing	785 (5.9)	942 (6.3)	1,082 (6.3)	1,182 (5.9)	1,225 (5.9)	1,323 (5.5)	1,456 (5.2)
Construction .. ..	620 (4.6)	701 (4.7)	792 (4.6)	894 (4.4)	1,003 (4.8)	1,663 (4.5)	1,123 (4.0)
Electricity, gas and water supply .. ..	68 (0.5)	87 (0.6)	109 (0.6)	127 (0.6)	150 (0.7)	174 (0.7)	197 (0.7)
Sub-Total .. ..	2,688 (20.1)	3,206 (21.4)	3,705 (21.5)	4,093 (20.2)	4,434 (21.3)	4,826 (20.2)	5,109 (18.2)
Transport and communication .. ..	582 (4.4)	736 (4.9)	806 (4.7)	877 (4.4)	958 (4.6)	1,051 (4.4)	1,102 (3.9)
Railways .. ..	252 (1.9)	313 (2.1)	353 (2.1)	360 (1.8)	400 (1.9)	414 (1.7)	413 (1.5)
Communication .. ..	63 (0.5)	80 (0.5)	91 (0.5)	100 (0.5)	113 (0.5)	136 (0.6)	143 (0.5)
Transport by other means	267 (2.0)	343 (2.3)	362 (2.1)	417 (2.1)	445 (2.2)	501 (2.1)	546 (1.9)
Trade, storages, hotels and restaurants ..	1,301 (9.7)	1,554 (10.0)	1,706 (9.9)	2,069 (10.2)	2,259 (10.8)	2,636 (11.0)	3,020 (10.7)
Sub-Total .. ..	1,883 (14.1)	2,230 (14.2)	2,512 (14.6)	2,946 (14.6)	3,187 (15.4)	3,687 (15.4)	4,122 (14.6)
Banking and insurance	158 (1.2)	224 (1.5)	249 (1.4)	288 (1.4)	335 (1.6)	353 (1.5)	397 (1.4)
Real estate and ownership of dwellings ..	386 (2.9)	447 (3.0)	528 (3.1)	563 (2.8)	585 (2.8)	622 (2.6)	652 (2.3)
Public administration and defence .. ..	538 (4.0)	668 (4.4)	778 (4.5)	890 (4.4)	992 (4.8)	1,112 (4.6)	1,205 (4.3)
Other services .. ..	905 (6.7)	1,026 (6.8)	1,059 (6.4)	1,236 (6.1)	1,374 (6.6)	1,547 (6.5)	1,729 (6.1)
Sub-Total .. ..	1,987 (14.8)	2,365 (15.7)	2,654 (15.4)	2,977 (14.7)	3,286 (15.8)	3,634 (15.2)	3,983 (14.1)
Total: net domestic product .. ..	13,380 (100.0)	14,999 (100.0)	17,231 (100.0)	20,229 (100.0)	20,753 (100.0)	23,902 (100.0)	28,187 (100.0)

\*Provisional.

Source: India 1969





## 2. Agriculture, Fishery and Forestry

### Agriculture

The Indian economy continues to be predominantly agricultural. It employs about 70% of the country's total labour force, and accounts for 49.4% (1967) of net domestic product at factor cost. Success or failure in improving the agricultural sector is the key to India's economic development.

The total area of lands devoted to agriculture was 755.8 million acres in 1965, the 1965 land utilization estimate, a breakdown of which is shown in the following table:

**AGRICULTURE**  
**LAND UTILIZATION**  
(1969-70—'000 acres)

TOTAL REPORTED AREA	PERMANENT PASTURES AND GRAZING LANDS	TOTAL IRRIGATED AREA	NET AREA SOWN	AREA SOWN MORE THAN ONCE	TOTAL CROPPED AREA
810,000*	n.a.	90,000*	340,000*	40,000*	380,000*

\* Estimate.

The main crops (in terms of production tonnage) are rice, wheat, jowar, oil seeds, jute, maize and cotton.

India had been suffering from a chronic food shortage: some of the worst monsoon failures occurred in 1965-66 and 1966-67, in which stringencies of food supplies caused serious political and social unrest. But, coupled with favourable climatic conditions, new technology and improved seeds have contributed to increase food production. The grain production of about 105 million tons, estimated for 1970, is 12 million tons above 1967-68 and about 30 million tons more than 1966-67. The country is not yet self-sufficient in grain (the amount needed for this is estimated to be about 129 million tons). The "green revolution", however, is showing results, though it is far from complete; compared with other years, India's food position can now be described as "comfortable". The government is emphasizing the use of new technology and increase in the acreage under high yielding varieties as the major policy instrument in this area. The more than 100,000 tube-wells in Punjab alone in recent years, the sharp increase of double cropping methods, the proliferation of tractors, the use of new strain of seeds and fertilizers, and other farm improvements, all testify to the agricultural transformation. Fertilizer production is expected to reach 2.8 million tons in 1971-72, compared with 586,000 in April 1967. Actual production of agricultural imports between 1960-61 and 1968-69 is shown below:



# Production of Fertilizer and Other Agricultural Inputs

	1960-61	1968-69
Chemical Fertilizers (Metric Tons)		
Nitrogenous	210,000	1,208,000
Phosphatic	70,000	382,000
Potassic	26,000	170,000
Agricultural Implements		
Tractors	31,000	91,000
Power Tiller	-	20,000
Electric Pumps	191,000	1,038,000
Diesel Pumps	230,000	650,000

Source: Far Eastern Economic Review

So far, the greatest success has been in rice and wheat, especially the latter: in Punjab alone, for example, the output of wheat increased by 50% in the past 3 years. Rice production, on the other hand, has not been as glamorous in its improvement, mainly because of the difficulty in developing a new, high-yielding variety of seed. So far, two high-yielding varieties (Pankaj and Jagannath) were released in 1969-70: both are of 150 day duration. If the on-going research in rice should produce the same result as it did in wheat, India could be self-sufficient in 3-5 years.

The latest comprehensive data on the production of crops in India are shown in the following table:

	AREA ('000 hectares)			PRODUCTION ('000 metric tons)		
	1966-67	1967-68	1968-69	1966-67	1967-68	1968-69
Rice . . . . .	35,598	36,722	36,966	30,441	37,858	39,761
Jowar . . . . .	18,001	18,630	18,731	8,944	10,107	9,804
Bajra . . . . .	12,458	12,539	12,052	4,503	5,132	3,802
Maize . . . . .	5,061	5,577	5,716	4,991	6,275	5,701
Ragi . . . . .	2,375	2,531	2,238	1,600	2,031	1,648
Small Millets . . . . .	4,720	4,756	4,748	1,671	1,912	1,893
Wheat . . . . .	13,135	14,917	15,958	11,528	16,568	18,652
Barley . . . . .	2,859	3,326	2,758	2,449	3,469	2,424
<i>Total Cereals</i> . . . . .	94,207	98,818	99,166	66,127	83,352	83,595
Gram . . . . .	8,015	8,236	7,105	3,612	6,042	4,309
Tur . . . . .	2,483	n.a.	2,529	1,731	n.a.	1,816
Other Pulses . . . . .	11,760	12,437	11,630	3,579	4,553	4,292
<i>Total Food Grains</i> . . . . .	116,465	129,491	120,430	75,049	93,947	94,012
Groundnuts . . . . .	7,251	7,553	7,091	4,485	5,829	4,476
Sesamum . . . . .	2,668	2,687	2,410	404	422	414
Rape and Mustard . . . . .	2,994	3,204	2,992	1,245	1,482	1,572
Linseed . . . . .	1,526	1,671	1,707	274	398	352
Castor Seed . . . . .	412	390	384	81	107	111
<i>Total Oil Seeds</i> . . . . .	14,851	15,595	14,584	6,489	8,238	6,926
Cotton . . . . .	7,834	8,047	7,685	4,931	5,562	5,270
Jute . . . . .	798	885	529	5,348	6,369	3,032
Mesta . . . . .	318	314	277	1,214	1,130	921
Tea . . . . .	345	348	348*	375	383	383*
Rubber (tapped area; Cal. year) . . . . .	—	n.a.	n.a.	—	n.a.	n.a.
Sugar Cane . . . . .	2,329	2,307	n.a.	92,726	9,959	n.a.
Tobacco . . . . .	398	398	412	350	344	347
Potatoes . . . . .	471	504	537	3,462	4,233	4,773
Chillies (dry) . . . . .	674	760	760*	403	487	487*

\* Estimato.

Source: Europa Yearbook





India is not (yet) self-sufficient in its cereals, as can be seen from the following table:

IMPORT OF CEREALS								
(in thousand tonnes)								
Cereals	1956	1962	1963	1964	1965	1966	1967	1968
Rice ..	3,30	3,90	4,83	6,45	7,83	7,87	4,53	4,46
Wheat and wheat flour ..	11,13	32,50	40,73	56,21	65,83	73,33	64,60	47,66
Other cereals..	—	—	—	—	96	17,38	18,19	4,82
TOTAL ..	14,43	36,40	45,56	62,66	74,62	103,58	86,72	56,54

Source: India 1969

Nevertheless, as cereal production continues to increase, the facilities of speedy transportation and safe storage become more and more important, whereas so far the primary concern was with securing food grains to meet rationing requirements. For example, in the state of Haryana, about 10,000 tons of wheat went to rot in 1969-1970 because they could not be transported quickly.

In addition to the foregoing table, some figures on 1969-70 agricultural production are available.

Sugar: A bumper cane harvest and a record sugar production of 4.26 million tons were achieved in 1969-70. Cane prices and crushing operations are controlled by the government, and the government also buys the bulk of the sugar from producers in order to sell it at a controlled price. Consumption of sugar in India increased in 1969-70 to 3.3 million tons, compared to 2.6 million tons of the previous year.

Cotton and Jute: Neither of these benefited from improved technology, and are still very dependent on weather conditions and world prices. In 1969-70, cotton production remained steady at about 6 million bales, and jute production was 6.7 million bales. The output for 1970-71 is estimated to be 6.4 million bales for cotton and 6.3 million bales for jute.

Poultry and Cattle: Production registered a remarkable rise. Cross-breeding of cattle received a great deal of attention: Jersey, Holstein, Guernsey and Brown Swiss breeds were imported for this purpose. By March, 1971, forty intensive cattle breeding projects were inaugurated, and the shortage of milk in Bombay, Madras, Calcutta, New Delhi and other urban centres is putting pressure on more rapid expansion in dairy production.

The Fourth 5-year plan sets a target for agricultural products as follows:



#### Fourth-Plan Targets for Major Agricultural Products 1969-74

Food Grains	129 million tons per year
Oil Seeds	10.5 million tons per year
Sugar Cane	15 million tons per year
Jute	7.4 million bales per year
Cotton	8 million bales per year

Source: Far Eastern Economic Review

The major problems of the "green revolution" are, first, it covers only 10% of the 740 odd million acres of cultivated land, and secondly, it benefits the relatively well-off farmers only. This leads to the problem of the displacement of small farmers without the financial means to take advantage of new developments, resulting in unemployment and hardship in city slums. Modern, mechanized farming not only requires larger capital input, it is also labour-displacing rather than labour-using. In addition to small farmers who may be obliged to sell out, the dislocation of share-croppers and tenants, who cultivate 25% of the land, face a higher rent and stiffer competition from other modes of production using new technology: the traditional rent of 50-50 split in crops is increasingly being replaced by a 30-70 split in favour of landlords. Thus, ironically, modernization of agriculture creates the danger of increasing the inequality in the distribution of income and wealth.

Agrarian reform is far from complete. India still has to solve the problems of the outmoded tenurial system, which provides neither security nor incentive. Legislations on the limitation of holdings, (land ceilings), formation of land pool for redistribution among tenants, security of tenure and reduction rent are enacted in all Indian states. At the highest level in the Indian Government, it is well understood that the problems of rural as well as urban poverty, whatever their causes, cannot be evaded for long. India has the talent and awareness to provide solutions to these problems, and a hard political decision may yet replace the enticing but un-translatable proposals. A well-defined programme and priorities, and vigorous implementation of all effective policy instruments may yet produce an environment conducive to economic growth without major sacrifice in social justice.

#### Fishing

India's fish catch is in the order of 1.3-1.4 million metric tons per year. (In 1968, the catch was 1,400,000 metric tons). Fish has not been a major food item in India, though in a number of states that face the Indian Ocean, especially in Kerala, Orissa and West Bengal, fish is becoming increasingly important in the diet of the people. In Orissa, for



example, there are eight freezing factories processing the fish catch for shipment to Calcutta, and there are 116 fishing cooperatives in the state of Orissa. A new slogan gaining popularity in 1970-71 is: if land does not provide enough, go to sea.

Fisheries development programmes fall into marine fishing and inland fishing. For marine fishing, there are numerous schemes of mechanization in fishing craft, researches of new fishing grounds, improvements in fishing techniques, provision of fish-landing, transporting, preserving and marketing facilities. For inland fishing, the development programmes centre around the improvement of fish-culture techniques, fish-seed resources, and construction of fish reservoirs. In total, there were about 7,500 mechanized fishing crafts in 1968-69. In order to develop exploratory fishing and fishing in distant waters, two large vessels of 106 feet in length were acquired and the construction of 40 shrimp trawlers of 57 feet in length were initiated. In addition, three large fishing vessels were received from Norway under the Indo-Norwegian Project. Also, construction of fishing ports has been completed at Bhaktal and Beypore, and further construction is underway at Porbandu, Umbergaon, Karwai, Cannanore, Baliapatram, Vizhinjam, Tuticorin and Cuddalore.

The statistics of fish production and disposal up to 1967 are shown in the following table:

#### PRODUCTION AND DISPOSAL OF FISH

(in thousand tonnes)

Year	Total catch and landings	Disposal			Reduction
		Fresh marketing	Cured		
			Sun-dried	Salted	
1965 .. ..	1,332	909	126	216	55
1966 .. ..	1,367	963	158	141	53
1967 .. ..	1,400	963	143	132	78

Source: India 1969

#### Forestry

The total area of forests is about 690 thousand square kilometers (266 thousand square miles). This is divided into "reserved forests" under the control of state forest departments, "protected forests" which are intended to be permanently maintained for the purposes of timber production or the protection of water supply, and "unclassified forests". The composition of areas devoted to different types of timber is: coniferous, 32,321 square kms; and non-coniferous, 657,230 square kms. The quantities and value of timber and firewood produced in India during 1950-51, 1955-56, 1960-61, 1963-64 and 1964-65 are shown below:





PRODUCTION OF TIMBER AND FIREWOOD

Year	Quantity (thousand cubic metres)						Total value (thousand rupees).
	Timber	Round wood	Pulp and match-wood	Fire-wood	Charcoal wood	Total	
1950-51 ..	29,92	8,37	13	1,11,66	7,81	1,57,89	19,03,07
1955-56 ..	33,94	7,20	42	92,33	15,76	1,49,65	27,68,82
1960-61 ..	45,94	7,54	80	1,13,51	2,93	1,70,96**	49,74,08
1963-64* ..	65,43	5,96	14	1,22,59	2,27	1,96,39	59,45,02
1964-65* ..	59,26	5,13	12	1,25,74	1,86	1,92,11	58,56,30

Source: India 1969

Apart from providing raw materials for paper and plywood manufacturing, forests are also the source of a number of products which are either exported or are important inputs for certain industries. The outputs of some of these are shown in the table below:

VALUE OF MINOR FOREST PRODUCE

(in thousand rupees)

Year	Bamboos and canes	Fibres & flosses	Gum and resins	Other minor products	Total
1950-51 ..	1,52,00	52	41,93	4,98,03	6,92,43
1955-56 ..	1,36,78	43	1,01,42	5,63,11	8,01,74
1960-61 ..	2,16,99	43	2,04,78	6,91,75	11,13,95
1963-64* ..	2,09,51	42	2,70,26	10,32,45	15,12,64
1964-65* ..	2,05,44	29	3,13,39	10,66,82	15,85,94

Source: India 1969

In order to improve the productivity of the forests, great emphasis is placed on forest communications, fuel wood plantations, survey of forest resources, planting of economic species such as teak, eucalyptus, sal, sissoo, and conifers, and an improved scheme of grading. The U.N. is providing financial assistance through its special funds for Pre-investment Survey of Forest Resources, to investigate the economic availability of raw materials for wood-based industries.

### 3. Industry

The Indian economy has long been described as one of the prototypes of economic underdevelopment: predominance of agriculture and cottage industries, social value systems strongly against acquisitive business mindedness, and abundance of unskilled and underemployed labour force.

In order to achieve a take-off in industrialization, India has had a number of five-year plans, seeking to establish a social overhead structure and a viable secondary manufacturing sector. The Fourth five-year plan, implemented in draft from 1969, sets an overall growth goal as 5.5% per



year, calls for expenditures amounting to Rs 252 billion (\$35.9 billion), and envisages a shift from the private to the public sector. To this end, a budget deficit of about Rs 2,250 million (\$320.5 million) is expected. Up to October 1969, industrial production (excluding jute goods and tea) registered a twelve-month growth rate of nearly 8%. Heavy industry and manufacturing expanded, though the output of capital goods remained static.

The geographic location of India's major industries is shown in the map below.



Source: The Financial Times - January 25, 1971.





The Indian Government's industrial policy aims at strengthening the socialistic pattern of production. Railways, air transport, atomic energy and defence industries are government monopolies. In a number of industries, new plants can be established only by state governments. These include iron and steel manufacturing, mineral oils, mining of coal, iron ore, manganese ore, gold, diamonds, and gypsum, and shipbuilding. Those industries in which the state, after initiating a new undertaking, permits private participation include chemicals, plastics, dyestuffs, fertilizers, drugs, and road transport machinery. The Industries Act requires industrial undertakings to be licensed. At present, 162 industries are listed under this Act. The government vigorously carried out its plans of nationalization of trade. Nearly 80% of India's imports, including raw cotton, cashew nuts, fertilizer and food grain, is nationalized.

The industrial products which recorded significant increase in production are non-electrical machinery, electrical machinery and apparatus, petroleum refinery products, and wood and cork, excluding furniture.

The following table shows the index number of industrial production.

Index Numbers of Industrial Production

(Base : 1960=100)

Groups	1951	1956	1961	1966	1967	Jan-Nov. 1968	Percentage change*
General Index	54.8	78.4	109.1	152.4	151.9	160.5	+5.6
Mining and quarrying	66.6	78.7	105.4	136.1	135.8	141.1	+4.4
Food manufacturing..	66.9	79.6	108.6	128.7	111.7	107.8	-2.5
Beverage & tobacco	58.0	71.1	107.0	158.9	149.4	163.1	+9.5
Textiles .. ..	79.7	98.0	102.8	103.9	107.6	112.0	+4.6
Cotton textiles ..	—	—	104.8	106.5	104.9	111.0	+6.2
Woollen textiles ..	—	—	99.3	129.6	122.5	136.3	+11.6
Jute textiles .. ..	—	—	89.1	100.4	104.1	97.9	-5.6
Textiles n.e.c. ..	—	—	114.5	164.6	155.2	160.8	+5.1
Footwear (leather) ..	63.5	67.4	115.4	184.2	194.3	190.8	+0.7
Wood & cork, except furniture .. ..	43.5	46.9	95.5	205.1	218.1	229.8	+5.0
Paper and paper products .. ..	38.5	58.1	105.8	160.0	167.1	184.0	+10.9
Leather & fur products	72.4	70.6	100.9	120.9	117.3	103.3	-10.9
Rubber products ..	56.1	69.6	112.9	160.2	171.4	198.5	+17.5
Chemicals & chemical products .. ..	42.4	63.7	113.4	168.4	172.2	195.3	+13.0
Petroleum refinery products .. ..	11.0	69.6	106.0	195.9	234.2	258.3	+10.3
Non-metallic mineral products .. ..	39.0	62.0	106.9	148.1	155.8	153.2	-1.5
Basic metal industries	46.5	56.4	118.7	189.6	181.8	190.2	+5.4
Metal products ..	30.7	74.6	112.4	208.4	192.1	180.8	-5.2
Machinery, except electrical machinery ..	22.2	52.2	121.2	291.2	299.3	323.4	+8.2
Electrical machinery, apparatus, appliances, supplies .. ..	26.3	56.5	110.0	225.1	243.4	271.5	+12.3
Transport equipment	19.6	102.8	116.7	156.4	144.9	144.1	-0.3
Miscellaneous manufacturing industries.	—	58.9	102.7	109.6	140.6	105.2	-24.1
Electricity. .. ..	35.7	58.5	116.3	207.8	230.7	264.8	+15.1

Source: India 1969.



The outputs of major industrial items, from 1966 to 1968, are tabulated below:

PRODUCTION IN SELECTED INDUSTRIES

Industry	1950-51	1955-56	1960-61	1965-66	1966-67	1967-68
<b>I. Mining:</b>						
1. Coal (lakh tonnes) ..	3,28	3,90	5,55	7,03	7,09	7,20
2. Iron ore (lakh tonnes)* ..	3.0	4.3	1,10	1,8	1,93	1,91
<b>II. Metallurgical Industries</b> ..						
3. Pig iron (lakh tonnes) ..	16.9	19.5	43.1	70.9	70.1	68.9
4. Steel ingots (lakh tonnes)	14.7	17.3	34.2	65.3	66.1	63.3
5. Finished steel (lakh tonnes) ..	10.4	13	23.9	45.1	44.3	40.0
6. Steel castings ('000 tonnes)	—	15	34	57	53	50
7. Aluminium (virgin metal) ('000 tonnes) ..	4.0	7.4	18.3	62.1	72.9	100.4
8. Copper (virgin metal) ('000 tonnes) ..	7.1	7.6	8.5	9.4	9.1	9.3
<b>III. Mechanical Engineering Industries:</b>						
9. Machine tools (lakh rupees) ..	30	80	7.00	29.43	35.49	28.51
10. Railway wagons ('000 nos.)** ..	2.9	15.3†	8.2	23.5	15.0	17.6
11. Automobiles (total) ('000 nos.) ..	16.5	25.3	55.0	70.7	75.2	69.5
(i) Commercial vehicles ('000 nos.) ..	8.6	9.9	58.4	35.3	35.6	30.8
(ii) Passenger cars, etc. ('000 nos.) ..	7.9	15.4	26.6	35.4	39.6	38.7
12. Motor cycles and scooters ('000 nos.) ..	—	0.9†	19.4	40.7	47.8	56.9
13. Power-driven pumps ('000 nos.) ..	35	37	1,09	2,44	3,11	2,88
14. Diesel engines (stationary) ('000 nos.) ..	5.5	10.4	44.7	93.1	1,12.2	1,14.0
15. Bicycles ('000 nos.) ..	99	5,13	10,71	15,74	17,19	16,84
16. Sewing machines ('000 nos.) ..	33	1,11	3,03	4,30	4,10	3,74
<b>IV. Electrical Engineering Industries:</b>						
17. Power transformers (lakh k.v.a.) ..	1.8	6.2	14.1	44.6	49.5	53.3
18. Electric motors ('000 h.p.)	99	2,72	7,28	17,53	20,95	20,30
19. Electric fans (lakh nos.)	19.9	2.9	10.6	13.6	13.6	13.8
20. Electric lamps (lakh nos.)	1,40	2,50	4,35	7,21	8,33	791
21. Radio receivers ('000 nos.)	54	1,02	2,82	6,06	7,61	925
22. Electric cables and wires						
(i) Aluminium conductors ('000 tonnes) ..	1.7	9.4	23.6	40.6	52.9	72.5
(ii) Bare copper conductors ('000 tonnes) ..	5.0	8.7	10.1	3.1	1.7	0.8



<b>V. Chemical and Allied Industries :</b>						
23. Nitrogenous fertilisers ('000 tonnes of N) ..	9	80	1,01	2,32	2,93	3,47
24. Phosphatic fertilisers ('000 tonnes of P <sub>2</sub> O <sub>5</sub> ) ..	9	12	53	1,22	1,44	1,93
25. Sulphuric acid ('000 tonnes) ..	1,01	1,67	3,68	6,62	7,02	8,58
26. Soda ash ('000 tonnes) ..	45	82	1,52	3,31	3,48	3,71
27. Caustic soda ('000 tonnes) ..	12	36	1,01	2,18	2,33	2,6
28. Paper and paper board ('000 tonnes) ..	1,16	1,90	3,50	5,58	5,80	6,2
29. Rubber tyres :						
(i) Automobile tyres (lakh nos.) ..	n.a.	9.0	14.4	23.1	24.3	24.7
(ii) Bicycle tyres (lakh nos.) ..	n.a.	58.0	1,11.5	1,84.6	2,03.4	227.9
30. Cement (lakh tonnes) ..	27.3	46.7	79.7	1,08.2	1,10.7	114.8
31. Refractories ('000 tonnes) ..	2,37	2,93	5,67	6,95	7,30	7,49
32. Petroleum products (refined, lakh tonnes) ..	2	34	58	94	1,19	1,38
<b>VI. Textile Industries :</b>						
33. Jute textiles ('000 tonnes) ..	8,37	10,71	10,97	13,02	11,17	11,56
34. Cotton yarn (crore kg.) ..	53.4	74.4	80.1	90.7	90.2	92.6
35. Cotton cloth (total) (crore metres) ..	421.5	626.0	673.8	744.0	7,30.4	7,51.1
(i) Mill sector (crore metres) ..	340.1	466.5	464.9	440.1	4,20.2	425.8
(ii) Decentralised sector (crore metres) ..	81.4	159.5	208.9	303.9	3,10.2	325.3
36. Rayon* yarn ('000 tonnes) ..	2.1	13.5	43.8	75.6	80.8	92.2
37. Art silk fabrics (crore metres) ..	28.7**	33.1**	54.4**	87.8	86.2	93.3
38. Woollen manufactures:						
(i) Woollen and worsted yarn (lakh kg.) ..	87	98	1,30	1,70	1,69	1,68
(ii) Woollen and worsted fabrics (lakh metres) ..	61**	68**	84	92	95	92
<b>VII. Food Industries:</b>						
39. Sugar (Nov.-Oct.) (lakh tonnes) ..	11.3	18.9	30.3	35.1	21.5	22.5***
40. Tea (crore kg.) ..	27.7	29.9	32.0	37.3	36.9	37.8
41. Coffee ('000 tonnes) ..	21.0	29.0	54.1	62.1	71.0	72.6
42. Vanaspati ('000 tonnes) ..	1,70	2,80	3,40	4,01	3,66	4,23
Electricity (generated) billion kwh)† ..	5.3	8.8	17.0	32.0	35.0	39.5

\*Exclude output in G.a.

\*\*Excludes output in Railway workshops.

†Relates to Calendar year.

\*Includes viscose yarn, staple fibre and acetate yarn.

\*\*Relates to calendar year. \*\*\*Sugar year has been changed to (Oct.-Sept.) from 1967-68 season onwards.

†Relates to public utilities only.

n. a. Not available

Source: India 1969





(a) Iron and Steel

Since its independence, India has tried to industrialize, and the most fashionable strategy for economic development at the time, was the establishment of iron and steel mills. In the early 1950's, when the strategy of economic development centered around the creation of a manufacturing sector, the iron and steel industry was viewed as the key to industrial take-off. As a result, iron and steel plants proliferated, and excessive emphasis was placed on their establishment. The gradual realization that there is a general excess capacity has led to the general slowing-down of plant-building activities. However, after disappointing performances in 1968, major factories such as the government-owned plant in Durgapur (British-built) and Rourkela (West-German-built) are once again picking up their production. Also, the construction of the Bokaro plant, which is being built with financial and technical assistance from the Soviet Union, is continuing at its leisurely pace. In the following table, the production statistics of iron and steel since 1956 are shown:

Production of Iron and Steel (000 tons)

Year	1956	1961	1962	1963	1964	1965	1966	1967	1968
Iron	1807	4980	5796	6603	6593	6952	7041	7010	6889
Steel	1338	2810	3708	4257	4343	4529	4491	4135	4435

Source: India 1969

In 1969, iron and steel production was estimated to be 12.3 million tons. The domestic demand for finished steel and pig iron is estimated to reach 7.12 million tons and 1.95 million tons respectively, by 1973-74. To meet these demands, the Fourth five-year plan includes the expansion of the Bhilai Plant from 2.5 million tons to 3.2 million tons capacity. The completion of the Bokaro Plant is expected to add 1.7 million tons of ingots, and the Fourth Plan envisages the expansion of its capacity to four million tons. The Fourth five-year Plan also includes the establishment of a plate unit.

As alloy and special steel products, little was produced even as late as the Second five-year plan, the Third Year Plan paid special attention to this field, and the Alloy Steel Projects of the Hindustan Steel Ltd. with a capacity of 60,000 tons of finished alloy and special steel has already gone into production and produced 24,815 tons in 1968-69. The Mysore Iron and Steel Ltd. is also completing a new installation which will be capable of producing 77,000 tons of alloy and special steel.



Exports of pig iron and steel have increased over the last few years, from 27,120 tons in 1963-64 to 1.23 million tons in 1968-69. The largest exporter has been the Hindustan Steel Ltd. Under the current plan, enlargement of the steel industry is contemplated, and iron ore exports are expected to exceed 21 million tons in 1970-71.

(b) Textiles

The Indian textile industry, at present, comprises 647 million units (358 spinning and 289 composite), with a total installed capacity of 17.45 million spindles and 208 thousand looms. About 25 - 40 new mills are established each year, and the cooperative sector in the textile mill industry is gradually taking shape. Mill cloth output in 1968 is estimated at 4.37 billion metres, and yarn output was 960.9 million kg. According to the studies by the Reserve Bank of India, the major portion of the investment during the three Plans was devoted to the expansion of the textile industry. Relatively less was devoted to rehabilitation and modernization, but under the Third Plan, an estimated Rs 105 crores were spent for these purposes.

An interesting feature of the Indian textile industry is the expansion of garment manufacturing sector. Fifteen years ago, a large portion of garments were custom-made, but now abundant supply of ready made clothes are available both in cotton and synthetic fibre.

The Working Group on Textile Machinery for the Fourth Plan has estimated that the demand for textile machinery and equipment generated by rehabilitation and modernization of the industry would likely be in the neighbourhood of Rs 1.3 billion. Also, the demand for machinery and equipment needed for expansion, is estimated to be Rs 1.34 billion.

The major problem in the Indian cotton textile industry is the shortage of cotton, which is also giving rise to a drain in foreign exchange. India's cloth-producing capacity rose during the past 10 years by over 33%, resulting in the expansion of spindlage from 12.05 million to 16.12 million. Meanwhile, cotton production lagged behind this pace, having risen only by 20%, from 4.64 million bales to 5.61 million bales. In the late 'sixties, while spindlage rose by 1.5 million units, cotton production was only 5.92 million bales in 1969-70, compared to 5.89 million bales in 1966-67. This phenomenon is becoming chronic, resulting in a rise in cotton prices of about 50-52%, while cloth prices cannot increase by the same ratio because of international competition. The first half of 1970, however, recorded a rise in cotton textile output: compared with 1969,





the production showed a growth of 3%. Output of cotton cloth was 2,137 million metres, as compared to 2,083 in the first half of 1969.

The latest survey by the Reserve Bank of India showed that (1) 121 companies out of 276 had incurred losses; (2) gross profit fell from 6.1% of net sales in 1966-67 to 5% in 1967-68; and (3) profit after tax fell to 1.9% from 4.5%. In addition to this, the cotton textile industry is faced with a proposed British tariff on its products.

In spite of these difficulties, modernization is proceeding with significant speed. Great emphasis is also being placed on improving the cotton harvest for the next three cotton seasons. In the face of growing demand for cloth, arising from an expanding population, failure to develop an adequate supply of raw cotton would lead to further inflation in the price of cloth, a "cloth famine", an increased drain on foreign exchange reserves, and a decrease in the exports of textiles, which are currently earning Rs 115 crores a year. This increase in cotton production should not be difficult, since India has the largest area in the world devoted to cotton farming but ranks only fourth in output, with yield per acre one of the lowest in the world: about 126 lbs per acre as compared with the world average of 306 lbs, or with Pakistan's 254 lbs. The Indian Cotton Mills' Federation has a cotton development project which calls for increased use of fertilizer, pesticides and improved seeds, as well as expanded and modernized irrigation facilities. It is estimated that Rs50 crores in expenditure for these purposes would result in the improvement of cotton production which would be worth over Rs750 crores in the form of expanded production and savings in foreign exchange.

### Jute

The jute production and trade set a record in 1964 by exceeding the targets in the Third Plan. The 1968 production of jute products declined because of poor rainfall and subsequent flood. Production in 1970 was better than average, with total output of 6.7 million bales, and the forecast of 1970/71 production is 6.3 million bales. Modernization of jute mills has made substantial progress; nearly 43 billion of the total of 53 billion of fine spindles have been modernized. Production of jute mill machinery during 1967 and 1968 was in the order of Rs 2.6 crores and Rs 3.0 crores. Most of the machinery required for the manufacturing of carpet backing cloth is now available within the country.



Production of Jute Manufacturers (Lakh Tons)

1955	1961	1963	1967	1968
10.27	10.09	12.89	11.56	10.85

Source: India 1969

Synthetic Fibres

The progress of synthetic fibre since its modest start in 1950 is significant: more than Rs 2.3 billion have been invested in the industry, and it now employs 40,000 persons. India, which imported man-made fabrics for 35 years, has become an exporter of these fabrics to African, Asian, European and American countries. (It provides essential raw materials for the operation of 100,000 powerlooms and more than 300,000 handlooms). There are nine firms with a combined capacity of 38,000 tons per year, producing rayon and acetate filament yarn. Also, there are two viscose staple fibre units with a total capacity of 70,000 tons per year. The facilities of production are tabulated below:

Productive Capacity of India's Man-Made Fibre (1969)

Product	No. of Production Units	Combined Capacity
Viscose Staple Fibre	2	70,000 tons per year
Rayon & Acetate Yarn	9	38,000 tons per year
Viscose Industrial Fibre	2	19,000 tons per year
Nylon Filament	6*	10,500 tons per year
Polyester Fibre	6*	5,000 tons per year

\* These six production units are producing both nylon filament and polyester fibre.

While the bulk of raw materials (pulp) for viscose rayon filament is being imported, viscose staple production is based entirely on domestic pulp. The capacity of the first rayon-grade pulp mill in Kerala is 66,000 tons per year. A 20,000 ton pulp mill is in operation in Tamil Nadu and a third unit with 33,000 ton capacity is being built in Mysore State. Caprolactum and DMT, the two main raw materials for production of synthetic fibres, have to be imported now, but by mid 1970's, these materials will be manufactured from domestic crude oils at Ankleshwar and Kalol in Gujarat.

For these purposes, India is in need of technological cooperation, and the demand for the import of plant design and technical know-how will be great.



Polypropylene is not yet well-known, but has great potential in India as a base for light, strong and inexpensive industrial fibre for fishing nets, ropes, filter cloth, etc.

Production of synthetic fibre was only about 300 million metres in 1951, but increased to one billion metres by the end of 1969. The synthetic textiles industry is producing woven fabrics, hosiery and warp-knitted fabrics. The last item is of relatively recent origin, and is already on the threshold of rapid expansion because of the increased use of nylon and polyester. (There are about 350 warp knitting machines and 150 Raschel looms).

The scale of operation in synthetic textiles is uneconomic by international standards: the largest viscose filament factory has a capacity of 30 tons a day and in many cases, from 2 to 7 tons daily. The normal average in Japan is 50 to 200 tons per day, depending on the nature of the materials and the products. This contributes to higher cost of Indian man-made textiles, and together with the high excise taxes on synthetics, is rendering Indian synthetic textiles less competitive than the products of other countries, particularly Pakistan. (Since synthetics is a growth industry, and popular acceptance is increasing, there is a movement towards the elimination of such heavy tax burdens as the excise taxes, which in some cases increased by 700% between 1956 and 1970. It would be a difficult move, considering the political pressures of the conventional textiles manufacturers, but the Hindu Survey of Indian Industry suggests that if it is not done, India could very well face a "textile famine").

Fourth Five-Year Plan Targets for Man-Made Fibres\*  
(in 1,000 tons)

	Suggested by Planning Commission	Suggested by Development Council	Suggested by the Industry
A. Textiles			
(1) Cellulosics			
a) Staple	9,000	11,000	12,000
b) Filament	6,400	6,400	6,000
Total	15,400	17,400	18,000
(2) Non-Cellulosics			
a) Staple	2,580	3,950	1,800
b) Filament	1,420	3,450	1,400
Total	4,000	7,400	3,200
B. Industrial	1,300	1,300	2,700

Source: The Hindu Survey of Indian Industry, 1970.

\* These targets have since been finalized along the lines of the Planning Commission.





(c) Chemicals

Although the chemical industry in India had its beginning as far back as the First World War, real progress began only after independence: in the private sector, 60 companies came into existence between 1946 and 1950 . By the time the Third Plan was completed, significant increases were recorded in the production of sulphuric acid, caustic soda, soda ash, calcium carbide, plastic raw materials, polyester, etc. In the field of organic chemicals and drugs, there was considerable expansion in the production of penicillin, tetracyclines, and chloramphenicol, aspirin and various vitamins. The creation of the Indian Drugs and Pharmaceuticals Ltd. (1961), and the Hindustan Organic Chemicals Ltd. (1960), has contributed toward solving the problem of bottle-necks arising from dependence on imported raw materials for these chemicals. The production of sulphuric acid, one of the most important chemicals, has been given a major boost by the establishment of a 400 ton-day capacity sulphuric acid plant in Sindri, which uses pyrites as raw material. The present installed capacity is 16 Lakh tons.

Fertilizers

Because of the overwhelming importance of agriculture in India, fertilizers constitute the most crucial item in India's economic development programme. As yet, the consumption of fertilizers in India is one of the lowest in the world: only 10.96 kg per hectare in 1967-68, compared to 371.25 kg. in Japan and 349.05 kg in West Germany. However, with the growing awareness of its value and the increasing use of modern farming techniques etc, the demand for fertilizers is expected to increase dramatically in the near future. Many experts agree that by 1973-74 the present total demand for nitrogen of 13.98 lakh tons will have increased to 32 lakh\*tons. In the case of P205, the demand is expected to go up from the present 4.35 lakh tons to 14 lakh tons. As to the market for K20, the increase is expected to be from 1.76 lakh tons to 900,000 tons.

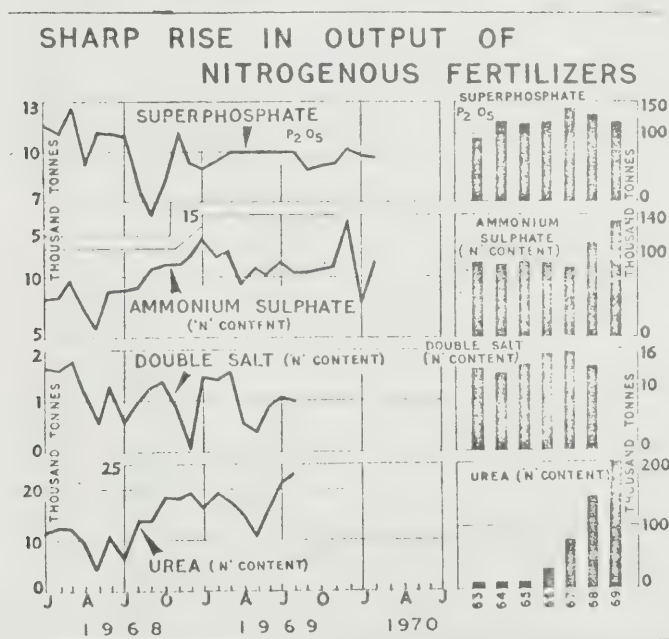
This means, that since domestic production is far below these figures, a huge amount of fertilizers must be imported. For obvious reasons, the government gives highest priority to the imports of fertilizers though the chief aim of its development plans is self-sufficiency in fertilizer. The prospect for Canadian exporters of fertilizers is therefore extremely bright in the shorter run, but diminishing demand should be expected over the longer run.

\* 1 lakh = 100,000



At present, there are 15 major fertilizer firms in (all) India (8 in public sector and 7 in private sector), with a total capacity of 1.3 million tons of nitrogen but with the output in 1970 - 71 reaching only 850,000 tons. The need, therefore, is in improving the efficiency of existing facilities as well as adding new capacities. There are major projects for expanding capacities. As far as existing facilities care concerned, the major problem is in fuller utilization of capacity already available: on the whole, production is still only around 50% of capacity.

Investment in the fertilizer industry increased from Rs 400 million in the First Plan and Rs 600 million in the Second Plan to Rs 2.5 billion by the end of the Third Plan (1969). By 1973-74, the total investment is expected to be Rs 10 billion. This is an indication that it is regarded as the "core" industry for development. Also, great emphasis is placed on self-reliance in know-how and engineering in developing fertilizers, with varying degrees of success. In some cases, a fertilizer plant or an oxygen plant has only 10% of foreign exchange content.



Source: The Hindu Survey of Indian Industry, 1970.



## Petro-Chemicals

Hydrocarbon production has expanded rapidly in the last few years, and it has helped stimulate the entire chemical industry by providing raw materials for numerous chemicals.

In order to adjust to the expanding demand in various parts of the country, regional expansion has been planned from the beginning of the petro-chemical industry. The one with the greatest economic significance to the Indian economy is the petro-chemical complex in Koyali, Gujarat. It is the first complete Indian plant which handles the entire process from the production of oil and gas through refining and then to the manufacture of aromatics and olefins to serve as raw materials for plastics, detergents, textile chemicals, dyestuffs, etc. The Fertilizer Corp. of India set up the first petro-chemical plant in India in December 1966, followed by a 60,000 ton naphtha cracker plant at Trombay by Union Carbide India Ltd. A PVC plant using ethyl alcohol went into production at Mettur in 1967. The 225,000 cracker of NOCIL (The National Organic Chemical Industries Ltd) at Bombay started its operation in 1968, along with two others, one in Durgapur and the other in Bombay. These are major public sector plants. A number of private plants have been licensed to produce PVC, non-cellulosic synthetic fibres such as polyester, acrylic, polyamide and PVA. At the end of the Third Plan, investment in the petro-chemical industry was estimated at Rs 2 billion. The total investment by the end of the Fourth Plan is expected to be about Rs 500 crores. The present and projected capacity and demand for petro-chemicals are shown in the following table:

CAPACITY FOR PETRO-CHEMICALS MANUFACTURE

	Capacity installed approved	Koyali complex	Total capacity 1973-74	Estimated demand	
				1973-74	1978-79
<b>BASIC</b>					
Ethylene	100,000	100,000	200,000	...	...
Propylene	41,000	40,000	87,000	...	...
Paradiene	30,000	15,500	45,500	...	...
Butadiene	15,000	15,500	97,000	...	...
O. Xylene	...	21,000	21,000	...	...
P. Xylene	...	17,000	17,000	...	...
<b>PLASTICS</b>					
Polyethylene	...	40,000	65,000	58,000	115,000
Low Density	25,000	...	20,000	23,000	45,000
High Density	24,000	...	...	...	...
P.V.C.	92,000	...	92,000	80,000	175,000
Polyethylene condolymers	23,100	10,000	39,100	35,000	70,000
Polypropylenes	...	10,000	10,000	7,000	15,000
<b>SYNTHETIC FIBRES</b>					
Polyester	21,400	...	24,400	36,500	76,000
Nylon	25,000	...	25,000	13,000	61,000
Acrylics	4,000	7,500	11,500	12,000	18,000
Polypropylene	...	5,000	5,000	3,000	10,000
P.V.A.	...	12,000	12,000	16,000	14,000
<b>SYNTHETIC RUBBER</b>					
S.B.R.	30,000	...	30,000	...	30,000
Polybutadiene	...	20,000	20,000	20,000	40,000
Butyl	...	...	...	30,000	80,000

IMPORTANT INTERMEDIATES

	Capacity installed & approved	Koyali complex	Total Capacity 1973-74	Estimated demand	
				1973-74	1978-79
<b>IMPORTANT INTERMEDIATES</b>					
D.M.F.	...	24,000	24,000	...	...
Caprolactum	22,000	...	22,000	...	...
Ethylene glycol	10,000	...	10,000	...	...
Acrylonitrile	...	16,000	16,000	...	...
Vinyl acetate	...	30,000	30,000	...	...
Phthalic anhydride	18,000	...	18,000	...	...
Phthalic anhydride	31,000	...	31,000	...	...
Methylmethacrylate	5,000	...	5,000	...	...
Isobutylene Oxide	12,000	...	12,000	...	...
Butyl and Isobutyl alcohol	14,000	...	14,000	...	...
2 Ethyl Hexanol	11,000	...	11,000	...	...
Phenol	17,000	...	17,000	...	...
Detergent Alkylate	28,000	...	28,000	...	...

Source: The Hindu Survey of Indian Industry, 1970.





(d) Electronics and Engineering

India has made a modest beginning in the electronics industry. Production in electronic equipment increased from Rs 280 million in 1964 to Rs 1.1 billion in 1969, or an annual expansion of 44.4%. However, this is far behind the target for development of the electronics industry, set by the H.J. Bhabha Report as Rs 3.1 billion.

The bulk of production consists of radio receivers, and the foreign exchange content has been reduced to Rs 15 per set. Production of tape-recorders and record players has started. Meanwhile, progress in the production of TV sets has been halting. TV has been recognized as the most powerful medium, and there is a great potential for TV sets when all stations in Bombay, Srinagar, Madras, Calcutta, Lucknow-Kanpur are in operation. The following table shows the actual and projected production of electronic equipment.

DISTRIBUTION OF ELECTRONICS PRODUCTION *						
(1964-1968).						
Sector of Industry	1964	Production 1965 (Figures in Rupees Crores)	1966	1967	1968	Projected 1973
Radio receivers and other consumer products	17.5	23.0	20.0	37.5	48.0	73.0
Radio communication equipment	3.7	4.0	5.9	9.2	11.6	89.0
Microwave systems and equipment	1.7	1.6	1.3	3.9	7.0	57.0
Radio transmitters Indl. process control instruments						
Railway signalling eqpt., and Indl. heating equipment	1.1	2.2	1.9	3.6	4.8	50.0
Electronic equipment for line communication	3.4	3.2	3.3	3.4	3.9	26.0
Computing and data processing equipment, nuclear instruments and equipment, medical instruments and equipment and other industrial instruments	1.3	1.5	2.0	1.7	2.9	33.0
Test Instruments	...	2.0	2.5	2.3	3.2	7.0
Total	28.7	37.5	42.9	61.6	81.4	305.0

\* "Electronics In India" by Rao A. S. and Parthasarathi A., National Electronics Council Review, London, October, 1969.

\* "Electronics in India" by Rao A. S. and Parthasarathi A., National Electronics Council Review, London, October, 1969.

SOURCE: The Hindu Survey of Indian Industry, 1970.

Another important field which uses electronics extensively, is avionics. One of the three units of the Hindustan Aeronautics Ltd. is producing air-to-air missiles and other avionics. Component production, projected to reach Rs 670 million by 1975, includes capacitors, semi-conductors, measuring gauges, potentiometers, convectors, etc. More than 20% of new capacity is expected to be devoted to defense, nuclear energy and communications services.

In July, 1968, the Electronics Committee of the Government of India set up a Working Group on Computers to assess the country's need for computers. (The Group found out that there were 111 computers in India in 1968, concentrated in 5 cities of Bougalore, Bombay, Calcutta, Delhi and Madras). Over 75% of the machines were used commercially, and their use in research, education and services



was relatively poor. The computer need for the next 10 years was estimated to be about Rs 75 million for large systems, Rs 125 million for medium systems, and Rs 275 million for small systems. This estimate does not include desk calculators, mini-computers, and other programme processors for special purposes. In the future, India will be concentrating on the manufacture of small and medium-size systems.

India's engineering industry has received considerable emphasis in successive five-year plans, and the country is self-sufficient in a number of products. Manufacture of transportation equipment, machine tools, construction and industrial machinery, and agricultural implements has been growing. The value of production of sugar plant machines was Rs 118 million in 1969, cement machinery Rs 82 million, cotton textile machinery Rs 144 million, pulp and paper machinery Rs 27 million dairy machinery 9 million, and jute machinery, Rs 22 million. The largest unite is the Hindustan Machine Tools Ltd. with many plants producing over 1000 machines per year. More details will be given in the next section.

(e) Non-Electrical Machinery

At present, there are two major units licensed to manufacture steel plant equipment on a regular basis: The publicly owned Heavy Engineering Corporation Ltd. at Ranchi, and the privately owned Utkal Machinery Ltd. (UTMAL) at Rourkela. The former is providing 70% of the machinery and equipment required in the large iron and steel plant at Bokaro.

The technical cooperation for the manufacture of cement-making machinery between Larsen and Toubro Ltd. (L & T) and the Danish manufacturer F.L. Smith & Co. A/S. in 1964 resulted in the domestic production of this equipment in Powai. Now, practically all required machinery can be domestically produced, and only about 10% of cement works equipment is imported. Of especially good quality are large rotary kilns, automatic packing machines which permit one man to pack and weigh as much as 2000 cement bags per hour. Many of these packing machines are actually exported to Europe. A pioneer in the production of cement-making equipment is Associated Cement Companies Ltd. (ACC).

The rapid pace of growth in chemical industries has resulted in the design and fabrication of chemical process equipment based on sophisticated technology for handling solids, liquids and gases through wide ranges of temperatures and pressures. Major companies in this field are Bharat Heavy Vessels & Plates, L & T, A V B, BHEL, ISGEC and Walchandnagar. For the fertilizer

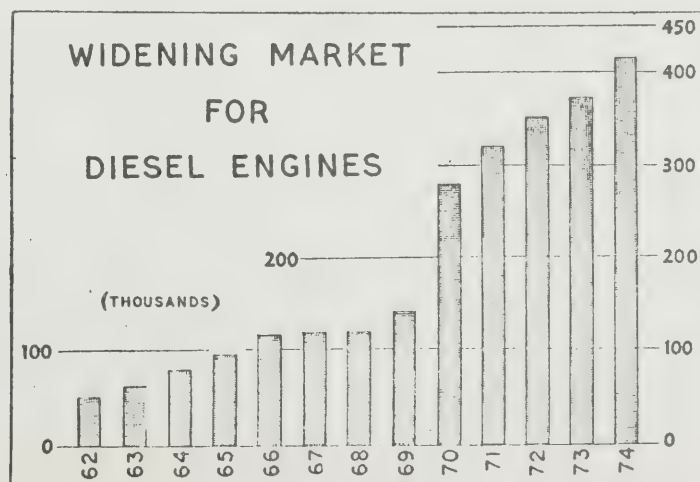


industry, five or six major workshops produce heavy vessels and equipment. Substantial progress is also made in the manufacture of heavy electrical equipment, used in the generation, distribution and utilization of electricity. For the first time, water and steam turbines and large generators were produced in India in the 1960's.

Significant progress has also taken place in nuclear power equipment. The first nuclear power station at Tarapur used imported equipment almost exclusively. But for the second power station in Rajasthan, 20% of the equipment was indigenous. Transformers of 220 kv are being produced and larger units can be built on demand.

The manufacture of pulp and paper machines has made some progress in recent years, and in the case of the batch-digesting process, a complete pulp mill can be built domestically without any capacity limitation. In the case of continuous digesting plants, a complete plant can be built domestically with the exception of the digester, which has to be imported. India can also meet the domestic demand for stock preparation equipment, approach flow systems and vacuum pumps. In paper plants, however, the maximum capacity is limited by the width of the machine that can be manufactured domestically: 5.5 metre wire-width. A paper machine with this wire width can produce writing and printing paper of about 50 - 60 gsm at 150 tons per day.

Diesel engines are finding increasing use in several fields. Farm application is a major stimulant in the development of the diesel engine industry in India. The total production in India was 223,000, which is fifth in the world, after U.K. (829,000), Japan (820,000), U.S.A. (475,000), West Germany (392,000). These engines are used for farm machines, farm irrigation, automobiles, power plants, etc. The market forecast for diesel engines indicates that by 1974, India will be needing over 400,000 units of various types.



Source: The Hindu Survey of Indian Industry, 1970.





Most of the diesel engines are manufactured in private plants. The largest unit is the Kirloskar Oil Engines Ltd. at Poona.

Metal-forming machines account of 10% of the total machine-tool market, or Rs 84 million. This is a relatively small proportion, compared to 30% in the U.S., partly because of the smaller markets in India for products such as refrigerators, automobiles, domestic appliances etc., which require metal-forming machines. The total number of metal-forming machines produced in India was calculated by the Directorate-General of Technical Development (DGTD) to be about 980 in 1968. In value terms, it was estimated to be around Rs 1 crores, compared to Rs 30 million in imports. This field offers a very attractive intermediate and long-run market to Canadian exporters.

As India continues to use more and more sophisticated industrial machinery and equipment, the use of ball and roller bearings can be expected to increase substantially. In spite of increasing production and the government's restrictive import policy, imports of bearings continue to expand rapidly. The value of imports was Rs 52 million (or 3.6 million bearings) in 1965, and Rs 72.7 million (4.5 million bearings) in 1966-67. This, of course, does not include the imports of bearings which form parts of complete machines which are imported as complete units. The latest estimate of the demand for bearings is 35 million bearings by the end of the Fourth Plan and 58 million by the end of the Fifth Plan. From the following table indicating the licensed capacity of bearings, one might infer that there is a large market for imported bearings in the years ahead.



TABLE I - LICENSED CAPACITY FOR BALL BEARINGS

Name of the Firm	Ball Bearings (Million Numbers)	Cylindrical Bearings	Other Bearings	Total
National Engineering Industries Limited, Jaipur	5.40	0.48	1.06	6.94
Antifriction Bearing Corporation, Lonavla	0.14	0.15	0.32	0.61
Shree Ram Bearings, Calcutta	3.78	0.15	1.07	5.00
Associated Bearings Company, Poona	3.00	-	3.00	6.00
Precision Bearings Ltd., Baroda	0.60	0.44	0.64	1.68
Roller Chains (India), Bombay	-	-	0.62	0.62
Indo Nippon Precision Bearings Limited, Hyderabad	1.20	0.48	1.20	2.88
P.S. Ball Bearings Company Ltd., New Delhi	1.80	0.48	1.20	3.48
<b>TOTAL</b>	<b>15.92</b>	<b>2.18</b>	<b>9.11</b>	<b>27.21</b>

NOTE: The annual licensed capacity is on two shift-basis, except in the case of NEI, Jaipur, which is on three shift basis (actual production achieved).

Among the other bearings, all units are licensed to make only taper roller bearings, except Roller Chains who are licensed to make needle roller bearings.

(f) Transportation Machinery

Locomotives and Coaches: To achieve self-sufficiency in railway rolling stock, the Ministry of Railways established a locomotive plant at Chittaranjan in West Bengal, a diesel locomotive plant at Varanasi in Uttar Pradesh, and the Integral Coach Factory at Perambur (Madras). So far, these factories have delivered 2,307 steam locomotives, 495 electric locomotives, and 6,724 unfurnished passenger coaches. In addition, the Bharat Earth Movers Ltd. produces about 270 broad gauge coaches annually, and Messrs. Jessop & Co. Ltd., a private company, is also producing 250 metre gauge and electric unit coaches per year.

Shipbuilding: There is at present only one major shipyard, the government-owned Visakhapatnam Shipyard. The total value of ship production, repair was Rs 68.14 million in 1967-68, compared to Rs 49.1 million in 1966-67. The government accepted a development programme



proposed by the Ad Hoc Committee, which is expected to increase shipyard capacity from 25,000-35,000 DWT to 80,000 DWT per year.

The government is now considering plans for the construction of a second shipyard at Cochin, with facilities to build ships up to 66,000 DWT and to repair ships up to 85,000 DWT. This project will cost an estimated Rs 360 million, and the Mitsubishi Heavy Industries, Japan, is conducting a basic survey of the site.

#### 4. Mining

The mining sector employed 413,790 in coal mining and 257,545 in non-coal mining in 1967. The important mining centres are in Bihar, Orissa, West Bengal, Madhya Pradesh, Rajasthan, Mysore and Andhra Pradesh. There are 789 collieries, 504 mica mines, 273 iron ore mines, 308 manganese ore mines, 267 limestone mines, 108 China-clay mines, 67 steatite mines, 93 gypsum mines, 74 fire clay mines, 54 dolomite mines, 66 barytes mines, 46 asbestos mines, and bauxite mines. The latest figures on mineral production are shown in the table below:





QUANTITY AND VALUE OF MINERALS PRODUCED IN INDIA

(Value in thousand rupees)

Mineral	Unit of Quantity	1967		1968 (Provisional)	
		Quantity	Value	Quantity	Value
Coal .. ..	*000 tonnes	68,223	1,974,481	70,485*	2,301,341*
Lignite .. ..	"	2,929	76,420	4,126	78,573
<b>Metallic Minerals</b>					
Bauxite .. ..	"	8,01	9,170	936	9,707
Chromite .. ..	Tonnes	1,13,868†	8,022	2,05,659	13,306
Copper ore .. ..	*000 tonnes	459	24,227	476	32,646
Gold†† .. ..	Kilograms	3,161	46,691	3,588	61,530
Ilmenite .. ..	Tonnes	42	1,774	59	2,176
Iron ore .. ..	*000 tonnes	19,068	1,87,915	20,489	2,02,826
Lead concentrates	Tonnes	3,995	2,113	3,566	1,886
Manganese ore .. ..	*000 tonnes	1,574	1,06,005	1,547	98,409
Rutile .. ..	Tonnes	2,534	2,456	2,686	2,646
Silver†† .. ..	Kilograms	3,471	1,254	2,802	1,483
Zinc (concentrates) .. ..	Tonnes	10,029	4,011	12,839	5,134
<b>Non-Metallic Minerals</b>					
Apatite .. ..	"	11,631	6,13	6,695	5,23
Asbestos .. ..	"	7,901†	1,125	8,922	1,409
Ballclay .. ..	"	7,777	79	8,353	82
Barytes .. ..	"	53,016	1,216	51,718	1,275
China clay (non-salcable crude) .. ..	"	3,40,465	N.A.	3,49,960	N.A.
China clay (salcable crude) .. ..	"	1,89,392	1,729	1,56,041	1,493
China clay (processed) .. ..	"	1,02,613	9,644	1,02,123	8,224
Corundum .. ..	"	326	1,75	170	91
Diamond .. ..	Carats	7,626	3,167	8,764	3,269
Dolomite .. ..	*000 tonnes	1,167	14,141	1,259	17,753
Firrcloy .. ..	"	426	3,497	419	3,431
Gypsum .. ..	"	1,034	8,346	1,321	11,157
Kyanite .. ..	Tonnes	50,374	11,290	64,361	13,969
Limestone .. ..	*000 tonnes	19,571	1,52,414	20,745	1,71,864
Magnesite .. ..	"	2,46,448	4,728	2,53,073	5,248
Mica (crude) .. ..	Tonnes	16,152	19,744	17,667	20,031
Salt (rock and other) .. ..	*000 tonnes	7,700	76,471	5,030	67,804
Sillimanite .. ..	Tonnes	5,800	4,55	4,643	3,75
Steatite .. ..	*000 tonnes	1,38,310	3,814	1,65,399	4,571

Source: India 1969

The National Mineral Development Corporation Ltd., was established in 1958 for the exploitation of minerals other than coal, oil and natural gas. Its authorized capital is Rs 300 million, and there is a proposal to increase this to Rs 700 million. The Corporation is responsible for the development of the 2 million ton-year Kiribu iron ore mine, two 40 Lakh ton-year iron ore mines in Bailadila area, and the new Donimalai iron ore mine in Mysore. The Corporation



is also developing diamond mines in Panna for the production of 23,250 carats of diamonds per year. So far, by the year ending in January 1969, 6,060 carats were produced. The copper ore mining in Khetri and Kolihan in Rajasthan is producing 31,000 tons of electrolytic copper per year, and also produces sulphuric acid and fertilizer as by-products. In addition to this Corporation, the Ministries of Mines and Geology in both state and central governments have a number of public companies engaged in prospecting and exploitation.

In the field of coal mining, the two major public and private companies are The National Coal Development Corporation and the Singareni Collieries Co. Ltd. The Integrated Neyveli Lignite Project envisages the mining of 3.56 million tons per year for the purposes of generating 2.5 megawatts of thermal electricity 1.5 million tons, producing 150,000 tons of nitrogen fertilizer (500,000 tons), and producing 360,000 tons of carbonized lignite briquettes fuel (1.5 million tons). All three plants have yet to be completed, but production has already begun.

India's crude oil reserve is estimated to be about 158 million tons, but it may go up to 200 million tons by 1974. Present production is in the order of 58 lakh tons per year, and it is expected to be 9.7 million tons by the end of the Fourth Plan. The growing need for petroleum, arising from the rapidly expanding petrochemical industries, is resulting in an accelerated pace of exploration. The Oil and natural Gas Commission is exploring for oil in the off-shore areas around the Indian coast, especially the Coromandal coast and the Gulfs of Cambay and Kutch. The Oil India Co. Ltd. (OIL) is exploring and producing crude oil and natural gas in the Naharkatiya, Hugrijan and Moran areas of Assam. It is also constructing a pipeline from the oil fields to the Nunmati and Baranuni refineries. In 1968 the Company supplied 2,765,416 tons of crude oil to two public sector refineries at Grauhati and Barauni.

A wholly government-owned company, the Indian Oil Co. Ltd. was incorporated in 1959 for the marketing and distribution of petroleum products. In order to better coordinate production (refining) and marketing, the "IOC" was merged with Indian Refineries Ltd. to form a new unit called the Indian Oil Corporation, with a Refineries Division and a Marketing Division. The Corporation imports large amounts of refined products, axle oil, lubricating oil, greases, transformer oil and aviation turbine fuel. It distributes the imported products and the products of domestic refineries, and exports the surplus.

In spite of new findings and expanding outputs, India still imports a considerable amount of crude oil, which is refined in refineries at Bombay, Visakhapatnam, Madras and Cochin.



Total imports in 1968 of crude oil and refined products were 1.14 crore tons, worth about Rs 1.3 billion (\$179.5 million).

## 5. Finance - Banking and Investment

The central bank of India, the Reserve Bank, was established in 1934. The Bank acts as adviser to the governments, commercial banks and other financial institutions, and manages the rupee public debt of the central and state governments. It is the caretaker of the country's foreign exchange reserves, and grants short-term loans to state governments, banks and financial institutions. The Bank also can regulate the banking system through the standard monetary policy instruments. There are 76 "scheduled" banks (included in the 2nd schedule of the Reserve Bank Act) and 33 "non-scheduled" banks, with total of 6133 offices altogether (1966).

The currency is the rupee (consisting of 100 paise), which has an exchange rate of about 7.28 rupees to one dollar (as of October 1971).

The wholesale price index rose from the base year (100) of 1955 to 250 in 1969. The annual price increase was 6.3% in 1970, compared with 4.6% in 1969. The annual rate of expansion in the money supply has been about 12%, far in excess of growth in real income, which on the average is 4 - 5%. Excessive deficit financing, both by the government and by the private sector, has been largely responsible for this situation: in 1970, the expansion of credit by "scheduled" banks was Rs 812 crores, or 22%, and about 25% of this expansion was financed through loans from the Reserve Bank. This is the result of providing funds for the so-called priority sectors indiscriminately, without a macro-economic perspective. Also, while taxation is being improved systematically, much of the tax revenues has gone to finance the current expenditures of government.

In order to control inflation, the monetary authority has resorted to a tight money policy. At the same time, emphasis is being placed on longer term improvement, through tax reform, investment-orientation in government expenditures, increase in productivity, equitable distribution of income, and overall monetary discipline.

## 6. Utilities

Energy The progress in power generation was very slow until the 1920's but by 1945, the installed capacity increased five-fold when compared with 1925, and between 1951 and 1966 the increase was nearly 392%. In terms of generating facilities, the plant capacity of steam power plants increased 302% between 1951 and 1966, and hydro and diesel plants expanded 617% and 116% respectively. The following table shows the index numbers of electricity supply.





INDEX NUMBERS OF ELECTRICITY SUPPLY (1951=100)

Major Head	March 1961	March 1962	March 1963	March 1964	March 1965	March 1966	March 1967
<i>Installed generating capacity</i>							
Steam plant .. ..	222.0	225.1	231.2	274.0	328.4	402.4	450.2
Oil plant .. ..	184.5	202.1	201.1	246.7	241.0	298.8	286.3
Hydro plant .. ..	333.2	420.3	510.6	550.6	578.6	716.9	831.4
Index of total generating capacity .. ..	253.5	284.3	316.1	358.3	403.0	491.8	555.0
<i>Generation of electricity</i>							
Steam plant .. ..	314.2	341.0	366.2	450.0	517.8	625.1	624.3
Oil plant .. ..	167.5	172.9	174.6	161.5	170.4	178.6	157.6
Hydro plant .. ..	274.0	343.2	412.8	488.0	517.5	532.4	585.2
Index of total generation	289.1	335.5	381.8	457.8	504.6	563.1	621.5
Coal consumption ..	270.3	292.0	322.6	323.4	388.9	414.6	453.3
Fuel oil consumption	153.1	161.6	163.3	154.6	170.9	253.1	149.7
<i>Sale of electricity</i>							
Domestic or residential	251.2	285.8	322.8	347.2	378.1	396.4	442.0
Commercial, light & small power .. ..	256.9	283.0	317.7	357.5	432.5	500.0	551.3
Industrial .. ..	317.0	377.4	428.6	517.9	568.1	617.1	667.0
Traction .. ..	137.3	177.4	219.6	229.6	272.6	324.4	358.0
Irrigation .. ..	410.2	488.1	543.5	567.9	687.9	931.7	1,037.0
Public lighting ..	285.8	318.8	362.2	361.6	400.6	413.6	455.7
Water works .. ..	207.6	228.1	252.5	265.0	286.1	297.5	331.1
Index of total sale ..	268.9	345.3	389.6	454.7	505.3	557.8	607.6

Source: India 1969

At the present, power development in India is expected eventually to be one of interconnected hydro-electric and thermal power stations in various regions, in which regional systems will be ultimately interconnected to form an all-India grid. About 75% of public utility installations is owned by state governments or state utility boards, and the rest is owned by municipalities, private companies and power corporations.

Rural electrification is one of the major undertakings in India's economic planning. At the end of the Third Plan, 44,380 villages were electrified, compared with only 3,619 villages at the beginning of the First Plan. This is giving rise to a great demand for power transmission and distribution equipment, as well as transformers, electric motors, pressure boilers for thermal power plants, etc. Although great emphasis is placed on the encouragement of domestic production, a large market still exists for imports in this field.

Nuclear power is expected to play a progressively important part in meeting energy demands in the future. The first nuclear power plant is now under construction at Tarapur, near Bombay. It will consist of two reactors, each with a capacity of 190 M.W. Another station with a capacity of 200 M.W. is also under construction at Rana Pratap Sagar in Rajasthan. Under the Fourth Plan, proposals for an expansion of the Rana Pratap Sagar plant by 200 M.W. and the establishment of a third plant at Kalpakkam in Tamil Nadu State, with 400 M.W. capacity, have been authorized. The actual supply of electricity is shown below:



# PROGRESS OF ELECTRICITY SUPPLY

Year	Installed capacity of generating plants (mw)				Aggregate of max. demand in the year (mw)	Energy generated (crore kwh.)	Energy sold (crore kwh.)	Average load factor (per cent)*	Average plant utilisation (Per cent)**
	Steam	Diesel	Hydro	Total					
1939 .. ..	541	87	442	1,070	576	244	203	48.4	53.8
1947 .. ..	757	98	508	1,363	883	407	336	52.7	64.3
1951 .. ..	1,097	163	575	1,835	1,205	586	479	55.5	65.7
1956 .. ..	1,597	228	1,061	2,886	1,990	966	796	55.4	68.9
1960-61 .. ..	2,436	300	1,917	4,653	3,546	1,694	1,395	54.5	76.2
1961-62 .. ..	2,471	329	2,419	5,219	3,971	1,967	1,645	56.5	76.3
1962-63 .. ..	2,538	327	2,936	5,801	4,635	2,236	1,868	55.1	79.9
1963-64 .. ..	3,008	401†	3,167	6,576	5,549	2,682	2,179	55.2	84.4
1964-65 .. ..	3,590	392††	3,328	7,310	6,257	2,956	2,422	53.9	84.6
1965-66 .. ..	4,417	486†	4,124	9,027	7,306	3,299	2,673	51.4	80.9
1966-67 .. ..	4,912	466††	4,782	10,190	8,292	3,638	2,913	50.2	81.4

\*Based on Cols. 6 and 7.

\*\*Based on Cols. 5 and 6.

†Includes 30,000 kw gas turbines.

††Includes 40, 00 kw gas turbines.

‡Includes 1,34,000 kw gas turbines.

Source: India 1969.

## Transportation

Railways The most important means of transportation in India is the railways: In 1967-68, it carried 107.5 million passenger kilometres and 197.6 million tons of cargoes. The 37 railway systems have been grouped into 9 railway zones for more effective administration. This includes all but 461 km of narrow-gauge, non-government feeder railways. The essential statistics of the railways are shown in the three tables below:



# PROGRESS OF ALL INDIAN RAILWAYS

(Including non-Government Railways)

Year	Route kilometres	Running rack (km.)	Passengers originating (lakhs)	Goods: tonnes originating (lakhs)
1950-51 .. .. .	54,845	60,567	1,30,78	9,30
1955-56 .. .. .	55,902	61,738	1,29,74	11,71
1960-61 .. .. .	56,962	64,319	1,61,39	15,76
1965-66 .. .. .	59,061	69,038	2,10,49	20,41
1966-67 .. .. .	59,075	69,475	2,21,29	20,27
1967-68 .. .. .	59,339	70,186	2,27,59	19,76

## ROLLING STOCK

Year	Number of locomotives	Number of coaching vehicles including electric multiple stock	Number of wagons
1950-51 .. .. .	8,615	20,889	2,11,873
1955-56 .. .. .	9,288	23,789	2,42,135
1960-61 .. .. .	10,731	28,730	3,09,434
1965-66 .. .. .	11,856	33,248	3,71,608
1966-67 .. .. .	11,729	33,505	3,77,064
1967-68 .. .. .	11,692	34,119	3,79,119

## PRINCIPAL COMMODITIES CARRIED

(in thousand tonnes)

Commodity	1955-56	1960-61 <sup>2</sup>	1965-66	1966-67	1967-68
Coal .. .. .	3,58,88	5,03,96	6,67,41	6,59,93	66,482
Cement .. .. .	40,22	65,48	86,49	88,92	9,353
Iron and steel* .. .. .	37,13	75,88	1,00,77	97,76	9,081
Metallic ores (other than manganese ore) .. .. .	44,43	1,11,40	1,86,23	1,91,10	19,695
Manganese ore .. .. .	14,00	12,30	14,97	13,64	1,286
Foodgrains .. .. .	91,87	1,26,59	1,45,14	1,64,49	14,702
Raw jute .. .. .	5,20	6,44	7,63	7,71	1,037
Tea .. .. .	2,62	2,50	2,03	2,91	255
Paper and paper products .. .. .	2,60	4,42	6,70	7,34	802
Jute manufactures .. .. .	2,94	2,63	2,75	2,67	254
Raw cotton .. .. .	7,51	5,36	4,85	4,74	448
Cotton textiles .. .. .	5,57	3,80	3,08	2,66	328
Oil seeds .. .. .	17,94	15,17	14,70	12,92	1,126
Sugarcane .. .. .	34,63	32,37	27,17	19,72	1,252
Sugar .. .. .	13,57	14,88	15,43	15,75	1,043
Salt .. .. .	18,87	19,81	25,69	23,48	2,567

\*Includes machinery, etc.

Source: India 1969.

## Roads

There were, in 1967, 245,339 motorcycles; 62,750 jeeps, 376,345 passenger cars; 128,250 public service vehicles; and 69,987 miscellaneous vehicles. In terms of area and





population, the density of roads comes to about 29.8 kilometres per 100 square kilometres and 1.81 kilometre per 1,000 people (1969).

There are 24,143 Km of national highways with 215 major bridges, and the Central Government also aids certain arterial roads in the States. In addition, there is the Border Roads Development Board, charged with developing arterial roads to border areas to stimulate economic development in these regions. The construction of about 7,000 km of new roads and the improvement of 4,700 km of existing roads are included in the Board's immediate programmes. In order to make more villages accessible by road, a new twenty-year plan (1961-81) is in operation.

#### PROGRESS OF ROAD CONSTRUCTION

Type	(Kilometres)					
	1947	1951	1956	1961	1966**	1969††
Surfaced Roads ..	1,45,855	1,57,019	1,83,023	2,35,790	2,83,385	3,24,940
Unsurfaced Roads‡	2,42,371	2,42,923	3,15,321	4,73,330	5,51,380	6,47,390
TOTAL ..	3,88,226	3,99,942	4,98,344	7,09,120	8,34,765	9,72,330

\*Percentage of passenger and mixed trains not losing time to the total number of trains on all Government railways.

\*\*Revised.

†Electric multiple unit trains of the Central, Eastern and Western Railways including non-suburban electric trains between Kalyan and Karjat and Kalyan and Kasara in case of broad gauge and all electric multiple units of Southern Railway in case of metre gauge.

‡Includes *kacha* roads constructed under C. D. and N.E.S. Blocks.

††Estimated.

Source: India 1969.

#### Waterways

India's inland waterways consist of over 14 thousand kilometres of rivers, of which 3,500 km are navigable by steamers. The major waterways are the Ganges and the Brahmaputra and their tributaries, the Godavari, the Krishna and their canals, the Delta Canals in Orissa, the West Coast Canals in Kerala, the Buckingham Canals in Tamil Nadu and Andhra Pradesh, and Mandavi and Zuari in Goa.

In ocean shipping, the National Shipping Board advises the government on shipping policies. The most important shipping unit is the Shipping Corporation of India, established in 1961 by merging the Eastern and Western Shipping Corporations. It has a fleet of 63 ocean-going vessels with 564,895 GRT in all. There are 38 other Indian shipping companies in the private sector. The



cargo carried by Indian sea-going vessels increased from 62 lakh tons in 1966-67 to 77 lakh tons in 1967-68, or 24%. The statistics of Indian sea traffic are shown below:

SEA TRAFFIC  
(1966-67)

SHIPS ENTERED	NET REGISTERED (million)	CARGO UNLOADED* (million metric tons)	CARGO LOADED* (million metric tons)
5,185	24.2	29.8	15.9

\* At Calcutta, Bombay, Madras, Vishakhapatnam, Cochin and Kandla only.

Source: Europa Yearbook

TRAFFIC AND EARNINGS OF MAJOR PORTS

Ports	Ships entered		Imports (lakh tonnes)	Exports (lakh tonnes)	Surplus (+) or deficit (—) in earnings (Rs. lakhs)
	Number	Gross tonnage (lakhs)			
Calcutta .. ..	1,461	108.25	48.85	41.07	(—)93.76
Bombay .. ..	2,768	197.13	124.44	45.21	(+)275.45
Madras .. ..	1,317	108.51	37.03	20.70	(—)23.11
Mormugao .. ..	676	65.04	4.18	77.14	(+)92.61
Cochin .. ..	1,209	90.70	37.32	16.93	(+)97.35
Kandla .. ..	271	25.16	22.60	2.05	(+)9.13
Visakhapatnam ..	590	60.48	24.14	40.93	(+)133.43
Paradip .. ..	N.A.	N.A.	0.6	8.90	(+)5.39

Source: India 1969

### Civil Aviation

The Indian Airlines Corporation has a fleet of 36 aircraft. The Corporation provides air services linking major cities within India and neighboring countries, including Burma, Ceylon, Afghanistan and Nepal. There are 85 aerodromes operated by the Civil Aviation Department of which those at Bombay, Calcutta, Delhi, and Madras are international aerodromes. The civil aviation statistics for the year 1966 are provided in the following table:

CIVIL AIR TRAFFIC  
(1966)

	KM. FLOWN ('000)	PASSENGERS CARRIED ('000)	FREIGHT CARRIED ('000 metric tons)	MAIL CARRIED ('000 metric tons)
Scheduled Domestic Services . . .	30,816	1,261	11.9	9.0
Scheduled International Services . . .	18,966	288	9.4	1.5

Source: Europa Yearbook



## Communications

In 1967, there were 7,579 thousand radios, 6 thousand television sets, one million telephones and 588 newspapers in India. The Department of Posts and Telegraphs runs 15 territorial units roughly corresponding to state boundaries. It employed (in 1968) 524,947.

Telegrams can be sent in any of the Indian languages provided they are written in Devangari script, and there is generally a facility to send cables in English.

The government is considering a wider use of television as a means of mass communication, and domestic production, as well as imports of television transmission facilities and receiving sets, can be expected to increase rapidly.

## 7. Tourism

The Department of Tourism has a chain of regional offices in India and abroad. The India Tourism Development Corporation with capital of Rs 50 million is in charge of promoting tourism, producing pamphlets, setting up duty-free shops in airports, providing entertainment, and making special arrangements for luxury accommodation, and train or car excursions to famous places such as Agra (Taj Mahal) and others.

The Hotel Standards and Rate Structure Committee was set up in 1957 to standardize hotel services and prices. At present, there are 59 restaurants and 166 hotels on the Department of Tourism's approved list. These hotels have 9,600 rooms in total, of which 5,244 are air-conditioned. This means that the accommodation is not adequate for the expected 400,000 tourists by 1973, though an additional 5,600 rooms are to be added shortly. To accelerate expansion in this industry, financial aid, tax benefits and other incentives are provided still tourism in India is very much underdeveloped: the target of hotel room number is 23,000 but Bangkok alone has as many as 23,000.

In conjunction with these promotional measures, regulations regarding police registration, currency control, customs and liquor and temporary landing permits are being relaxed. Concessionary tickets on railways for tourists are also being made available. There are 76 officially recognized travel agencies and over 300 shops in tourist centres.





**TOURISM**  
**FOREIGN TOURISTS—1968**

Australia/New Zealand . . . . .	10,615*
Benclux . . . . .	3,098
Canada . . . . .	3,575
Ceylon . . . . .	19,899
France . . . . .	12,094*
German Federal Republic . . . . .	4,222*
Japan . . . . .	8,352*
Malaysia . . . . .	8,823*
Scandinavia . . . . .	3,792
United Kingdom . . . . .	38,037*
U.S.S.R. . . . .	2,057
United States . . . . .	52,836*
<b>TOTAL (incl. others except Pakistan)</b>	<b>244,724*</b>

\* 1969.

1970: 275,000 tourists visited India.

Source: Europa Yearbook.

The latest data on the number of tourists visiting India is that of 1970. In that year, a total of 275,000 tourists came to India (excluding visitors from Pakistan). This represents a 30% increase over 1968. The number of tourists is expected to exceed 400,000 by 1973.



## FOREIGN TRADE

### 1. The Structure of Foreign Trade

In 1969, India's exports were Rs 13,754 million (\$1,819.3 million) and imports were Rs 15,333 million (\$2,028.2 million). In the same year, the Indian National income was Rs 308 billion. Thus, trade constitutes 9.4% of national income. In recent years, India's trade pattern has undergone considerable changes, showing greater diversification as well as expansion.

India has trade agreements with almost all countries in the world. In 1970, India concluded new trade agreements with Afghanistan, Bulgaria, Cameroon, Czechoslovakia, France, East Germany, Greece, Hungary, Iran, Iraq, Jordan, North Korea, Morocco, Philippines, Poland, Rumania, Sudan, Thailand, Tunisia, U.A.R. and U.S.S.R. Many of these countries were visited by Indian trade delegations. A textile agreement with the U.S. (1970) fixed India's annual quota at \$101 million, and provides for steady annual expansion.

India's trade policy is geared towards achieving greater export earnings through the expansion in the production of export-goods as well as import-substituting goods. This policy has had a certain degree of success in the past. In 1969-70, India's imports fell by 14% compared with a year earlier, while exports rose by 4%. The basic pattern of India's trade has been the predominance of primary products in her exports and of manufactures in her imports. This basic pattern still exists, but exports of manufactures are increasing in importance. India's new trade regulations also provide incentives for exporters to build a stock of imports needed for their manufacturing activities, while adding 316 new items to the list of prohibited imports. In the table below, a broad outline of India's trade is shown:



# EXTERNAL TRADE

(million rupees)

Imports: (1966-67) 20,784; (1967-68) 20,076; (1968-69) 18,616.

Exports: (1966-67) 11,529; (1967-68) 11,928; (1968-69) 13,563.

## COMMODITIES

IMPORTS (c.i.f.)	1967-68	1968-69	EXPORTS	1967-68	1968-69
Food . . . . .	5,792	4,031	Food . . . . .	3,622	3,641 -
Cereals . . . . .	5,182	3,366	Tea . . . . .	1,802	1,565 -
Beverages and Tobacco . . . . .	18	11	Beverages and Tobacco . . . . .	356	338
Crude Materials, Inedible . . . . .	1,910	1,899	Crude Materials, Inedible . . . . .	1,943	2,120
Textile Fibres . . . . .	1,053	1,218	Metal Ores and Scrap . . . . .	991	1,133
Minerals, excl. Fuels and Precious Stones . . . . .	453	244	Cotton Fibres . . . . .	194	157 -
Mineral Fuels and Lubricants . . . . .	749	842	Mineral Fuels and Lubricants . . . . .	91	121
Animal and Vegetable Oils and Fats . . . . .	344	193	Animal and Vegetable Oils and Fats . . . . .	42	120 -
Chemicals . . . . .	2,726	2,814	Chemicals . . . . .	157	237
Fertilizers, Manufactured . . . . .	1,390	1,376	Manufactures . . . . .	5,107	6,030
Manufactures . . . . .	2,545	2,502	Leather and Leather Goods . . . . .	535	727
Iron and Steel . . . . .	1,063	862	Textile Yarns, Fabrics, etc. . . . .	3,504	3,557
Copper . . . . .	355	392	Cotton Manufactures, excl. . . . .		
Metal Manufactures . . . . .	142	135	Yarn, Thread and Clothing . . . . .	794	880
Machinery and Transport Equipment . . . . .	5,031	5,164	Jute Manufactures . . . . .	2,335	2,169
Non-electrical Machinery . . . . .	3,366	3,700	Machinery and Transport Equipment . . . . .	191	436
Power-generating Machinery, non-electrical . . . . .	425	348	Miscellaneous Manufactures . . . . .	359	465
Metal-working Machinery . . . . .	427	348	Other Items, n.e.s. . . . .	60	55
Industrial Machinery and Parts . . . . .	2,323	2,817			
Electrical Machinery . . . . .	856	811			
Transport Equipment . . . . .	809	654			
Miscellaneous Manufactures . . . . .	277	247			
Other Items, n.e.s. . . . .	684	913			
<b>TOTAL . . . . .</b>	<b>20,076</b>	<b>18,616</b>	<b>TOTAL . . . . .</b>	<b>11,928</b>	<b>13,563</b>

Source: Europa Yearbook

Breakdown of India's trade with the whole world is not available in detail for 1969. India's trade with industrialized nations, which amounted to \$1,292 million exports and \$1,263 million imports, is available in detail and may be obtained by our Section by request.

## 2. Analysis of Indian Imports

India is attempting to achieve the maximization of domestic import-substituting productions. The ruling Congress Party of Mrs. Gandhi is in favor of the nationalization of imports, at least raw materials. A feature in the pattern of imports, has been the predominance of manufactures. However, as a result of continuous efforts at import substitution, the proportion of imports accounted for by raw materials and capital equipment is increasing. The following table shows a broad breakdown of imports by commodities:





# IMPORTS OF PRINCIPAL COMMODITIES

(By sea, air and land)

(Rs. lakhs)

Commodity	1963-64	1964-65	1965-66	1966-67	1967-68	Apr-Dec. 68
Iron & Steel .. .. .	93,15	104,96	98,00	97,90	106,20	61,20*
Machinery other than electric	282,12	313,05	332,44	408,00	336,00	163,80*
Petroleum products .. ..	58,22	41,33	33,35	27,03	15,10	22,50
Transport equipment .. ..	71,06	73,47	70,55	62,21	76,32	49,75
Electric machinery and appliances .. .. .	84,80	91,22	87,80	105,89	83,95	61,55
Raw cotton .. .. .	48,84	58,09	46,21	56,47	83,48	75,84
Wheat, unmilled .. .. .	134,84	241,92	264,73	423,04	378,47	1,91,79
Petroleum, crude and partly refined .. .. .	46,17	27,23	34,87	36,09	59,73	45,43
Chemical elements and compounds .. .. .	32,11	34,04	35,86	54,05	78,04	68,88
Manufactures of metals .. ..	15,82	16,99	18,17	17,26	14,11	10,40
Textile yarn and thread .. ..	10,70	9,13	5,92	7,14	3,78	3,20
Copper .. .. .	26,04	24,41	33,37	39,11	35,46	26,52
Rice .. .. .	37,50	40,17	41,90	81,64	54,76	38,65
Medicinal and pharmaceutical products .. .. .	8,64	8,21	8,73	17,41	17,52	12,74
Fresh fruits and nuts .. ..	15,43	19,29	18,86	24,08	31,83	23,59
Raw wool and hair .. .. .	15,72	9,64	5,12	11,78	11,82	8,75
Paper and paper-board .. ..	12,25	12,88	13,23	21,23	17,36	13,81
Oilseeds, nuts and kernels ..	9,16	7,04	8,81	4,72	5,23	2,44
Coal-tar, dyestuffs and natural indigo .. .. .	5,26	5,19	3,75	4,44	3,97	3,51
Aluminium .. .. .	6,46	7,24	6,29	15,21	17,67	4,16
Milk and cream, dried or condensed .. .. .	8,54	6,74	6,64	21,85	13,30	8,34
Misc. chemicals and products	9,52	5,01	6,88	16,37	15,09	13,35
Zinc .. .. .	9,86	11,15	12,84	10,86	14,30	18,62
Raw jute and waste .. .. .	2,06	7,33	9,16	20,57	1,77	4,83
Crude minerals (excluding coal, petroleum, fertiliser materials and precious stones)	10,16	11,80	11,57	19,00	45,33	18,18
Vegetable oils .. .. .	4,20	4,80	7,11	11,27	15,57	6,39
TOTAL (including other items)	1,222,85	1,349,03	1,408,53	2,078,30	19,74,28	13,76,49

\*Figures are for April-September.

Source: India 1969

Breakdowns of India's trade with the whole world are not available for 1969 imports, but the figures show that, after reaching Rs 21 billion in 1967, imports declined to Rs 19.7 billion in 1968 and again to Rs 15.3 billion in 1969 (the last figure is obtained from IMF. International Financial Statistics). The decline occurred mainly in the import of foodgrains and raw jute because of better domestic crops, but part of the decline can be attributed to the shortage of foreign exchange and slackness in the home market. In view of the trend of revival in industrial activities, the import of commodities other than food grains is likely to be higher in the not-too-distant future. The items with the largest prospective markets are fertilizers, capital equipment of high technology-content, and certain specialty machines. The market for food grains depends on the outcome of the "green revolution", but in general, can be expected to diminish in importance.



India has restricted imports in order to foster its domestic manufacturing industry. New trade measures for the 1970's continue this policy by adding 316 new items to the list of prohibited imports. These items include: boot and shoe grindery (16 items); certain types of ball and roller bearings; garage tools; textile machinery and parts; motor vehicle parts; parts for domestic refrigerators; insecticides, fungicides and weed killers; 37 chemicals; 4 laboratory reagent chemicals; tires for motor vehicles; drugs; some compressor parts; 70 mm and 35 mm projector components; 10 machine tools; parts of air conditioning, ice-making and refrigeration equipment; several transparent cellulose wrapping materials; and 14 types of steel products. In addition, the Indian Government announced that imports of 129 items would be allowed only if (1) no domestic production exists; (2) domestic production is insufficient; or (3) domestic products are unsuitable for the particular purposes for which the imports are intended. This latter list includes certain iron and steel valves and cocks; seamless tubes; copper scrap; aluminum wire rods with a purity of over 99.5%; gauge blocks; gas compressors and parts; spare parts for air compressors and power pumps; 14 items of dye intermediates; 11 items of textile machinery; 5 types of drugs and medicines; 15 items of motor vehicle parts; 40 chemicals; 7 raw materials for paints; plastic cloth; PH meters; fish finders; nickel catalyst; plastic materials; certain activated bleached earth; refined castor oil, linseed oil and solvents extracted from groundnut oil; and certain sizes and types of bearings (the above two lists of items are obtained from the International Commerce, May 12, 1969).

The largest supplier of India's imports is the United States. The United Kingdom, traditionally the largest trading partner of India, has been declining in importance: until 1967-68, the U.K. was the second largest supplier of India's imports, next to the U.S., but in 1968-69, second place was taken by the Soviet Union. The principal suppliers of India's imports are shown below:



## India's Trading Partners - Imports

Rs Million

IMPORTS	1967-68	1968-69
Australia . . . . .	650	257
Belgium . . . . .	178	103
Burma . . . . .	92	165
Canada . . . . .	983	987
Ceylon . . . . .	33	20
Czechoslovakia . . . . .	273	353
France . . . . .	344	364
German Democratic Republic . . . . .	216	205
German Federal Republic . . . . .	1,439	1,197
Iran . . . . .	329	357
Italy . . . . .	343	495
Japan . . . . .	1,084	1,153
Malaysia . . . . .	93	77
Netherlands . . . . .	257	177
Pakistan . . . . .	21	—
Poland . . . . .	238	218
Sweden . . . . .	184	167
Switzerland . . . . .	134	151
Thailand . . . . .	247	351
U.S.S.R. . . . .	1,112	1,855
United Kingdom . . . . .	1,627	1,279
United States . . . . .	7,766	5,751
Yugoslavia . . . . .	200	89

Source: Europa Yearbook

### 3. Analysis of Indian Exports

While India's imports in 1969-70 fell by 14% compared with 1968-69, her exports increased by 4%. This is a much slower growth rate compared with the 13.5% expansion in 1968-69 over the previous year. This is due in part to a drop in the prices of 8 important primary products, a surplus in the tea market, and keen competition in the jute and cotton textile markets. Other items where exports experienced losses include cashew kernels, castor oil, oilcakes and manganese ore. Meanwhile, appreciable expansion took place in the exports of ground nuts, fish and fish products, and mica.

India's two traditional exports, tea and jute, are facing serious problems. The difficulties in tea exports are due to the emergence of alternative beverages, the increasing popularity of tea bags which use much less tea leaves, and an overall surplus in tea production in the world market, partly caused by the rise in new African tea exports. The problem with the jute exports is that India's chief competitor, Pakistan, has been steadily gaining ground at India's expense. The main jute products are sacking, hessian and carpet-backing. In sacking and hessian, Indian exports are falling because of Pakistani competition and because the total world demand is decreasing. In carpet-backing, where the main growth in demand is taking place, India retains its dominant position.





However, with the large number of jute mills in Pakistan, the Indian predominance may not be secure for too long.

Another important export item is textiles, especially of cotton. As described in the section on textiles, India is faced with a shortage of raw cotton and a possible British tariff on cotton textiles. A major effort is being made to increase the domestic supply of raw cotton, but indications are that the process will be long and difficult. In addition, there is competition from man-made fibres.

The traditional pattern of exports -- predominance of the products of primary and light secondary industries -- persists. But as a result of a series of developmental programs, the share of manufactured products is increasing. Aside from jute, tea and cotton manufactures, the exports of iron ore and concentrates, iron and steel, fruits and nuts, leather, tobacco and coffee are increasing. As can be seen from the following table, the exports of hides and skins declined over time while that of leather increased: and leather is more valuable than hides and skins. The major items of Indian exports are shown below:



# EXPORTS OF PRINCIPAL COMMODITIES

(By sea, air and land)

(Rs. lakhs)

Commodity	1963-64	1964-65	1965-66	1966-67	1967-68	Apr-Dec. 68
Jute manufactures (excluding twist & yarn) .. ..	152,14	167,23	181,62	249,00	233,53	159,64
Tea .. ..	123,38	124,65	114,84	158,41	180,20	133,48
Cotton manufactures (excluding twist and yarn) ..	50,36	64,16	63,29	75,60	79,44	66,32
Textile fabrics (other than cotton and jute) .. ..	18,08	8,68	7,42	6,23	6,14	6,61
Textile articles (other than cotton and jute mfrs., woollen carpets, carpeting, floor rugs and mattings) ..	11,21	5,42	4,58	6,68	5,76	5,14
Textile yarn and thread ..	16,68	14,40	15,07	20,36	16,12	17,91
Ores of non-ferrous base metals and concentrates ..	9,73	14,51	11,54	16,24	12,99	11,92
Leather .. ..	26,20	27,16	28,21	61,85	53,22	53,74
Raw cotton (excluding linters and waste) .. ..	21,11	10,58	10,39	11,83	14,75	8,23
Fresh fruits and nuts (excluding oilnuts) .. ..	23,76	31,05	29,24	43,19	45,06	48,65
Crude vegetable materials, inedible* .. ..	15,99	17,05	16,78	22,87	19,14	15,85
Raw wool .. ..	6,52	7,65	6,43	6,74	5,65	3,72
Sugar (including molasses) ..	27,10	18,21	11,19	18,14	16,44	3,43
Iron ore and concentrates ..	36,40	37,39	42,37	70,19	74,78	62,46
Tobacco, unmanufactured ..	21,09	24,38	19,57	21,52	34,85	27,10
Vegetable oils (non-essential)	19,93	7,05	4,09	2,83	3,96	10,08
Crude minerals (excluding coal, petroleum, fertiliser materials and precious stones) .. ..	12,05	13,03	14,61	18,78	19,69	14,08
Woollen carpets, carpeting, floor rugs & mattings ..	5,26	5,37	4,48	8,01	9,45	8,04
Iron and steel .. ..	3,61	10,33	12,38	24,69	54,83	61,51
Coffee .. ..	8,31	13,42	12,94	15,84	18,18	15,72
Hides and skins, undressed ..	9,59	9,05	9,55	16,09	7,39	3,75
Petroleum products .. ..	7,41	7,89	6,46	10,30	7,32	7,08
Coal, coke and briquettes ..	2,35	4,36	2,86	2,36	1,83	2,20
<b>TOTAL (including other items but excluding re-exports) ..</b>	<b>789,28</b>	<b>813,15</b>	<b>801,65</b>	<b>1,152.88</b>	<b>11,92,80</b>	<b>10,16,35</b>

\*N.E.S. : Nowhere else stated in trade classification list.

Source: India 1969



Over the years, India has been consistently trying to expand and diversify her exports through financial aids, incentives, provision of transport facilities, training, market research, rationalization, etc. Cash assistances are offered to exporters of non-traditional goods, and important indigenous raw materials are allotted to domestic industries on a priority basis. The Board of Trade (est. 1962) is in charge of reviewing export promotion policies in consultation with trade and industrial institutions. There are 19 Export Promotion Councils, a Directorate of Exhibitions, a Textiles Committee, the Indian Institute of Foreign Trade, and the Indian Institute of Packaging, all primarily concerned with the promotion of exports and/or the coordination of such efforts.

In terms of geographical distribution of Indian exports, the largest customer is the U.S., followed by the U.K., Japan, and the U.S.S.R. The major buyers of India's exports are shown below:

India's Trade Partners (Exports)

Rs Million

EXPORTS (f.o.b.)	1967-68	1968-69
Australia . . . . .	280	255
Belgium . . . . .	207	315
Canada . . . . .	297	297
Ceylon . . . . .	148	234
Czechoslovakia . . . . .	292	317
France . . . . .	154	200
German Democratic Republic . . . . .	203	198
German Federal Republic . . . . .	217	261
Italy . . . . .	177	179
Japan . . . . .	1,357	1,532
Malaysia . . . . .	69	70
Netherlands . . . . .	130	153
Nepal . . . . .	184	247
New Zealand . . . . .	63	68
Pakistan . . . . .	—	—
Poland . . . . .	220	249
Sudan . . . . .	207	185
U.S.S.R. . . . .	1,205	1,481
United Arab Republic . . . . .	215	218
United Kingdom . . . . .	2,285	2,008
United States . . . . .	2,062	2,334
Yugoslavia . . . . .	116	188

Source: Europa Yearbook





# CANADIAN TRADE WITH INDIA

## 1. General

Canada and India both belong to the Commonwealth, and consequently accord each other Commonwealth preferential treatment. Trade between the two countries has been overwhelmingly in Canada's favour: Canadian exports to India are more than twice as much as Canadian imports from India. Since India receives large amounts of foreign aids, many of the major imports are purchased under aid programmes, with terms and conditions stipulated by these programmes. The foreign aid position of India as of September 1967 is shown below:

FOREIGN AID  
(Position at end of September 1967—million U.S.\$)

SOURCE	TOTAL AUTHORIZA- TIONS	AMOUNT UTILIZED
<i>Loans Repayable in Foreign Currencies:</i>		
World Bank . . . . .	1,024.4	848.1
IDA . . . . .	889.7	717.9
U.S.A. . . . .	2,544.3	2,090.1
German Federal Republic . . . . .	989.1	822.7
Bulgaria . . . . .	14.9	—
U.S.S.R. . . . .	1,362.0	666.0
United Kingdom . . . . .	918.7	794.5
Japan . . . . .	443.3	290.6
Canada . . . . .	175.8	81.3
France . . . . .	136.9	66.8
Italy . . . . .	204.0	24.8
Poland . . . . .	86.7	26.5
Czechoslovakia . . . . .	132.5	48.3
Yugoslavia . . . . .	124.9	28.9
Netherlands . . . . .	62.8	43.1
Belgium . . . . .	25.2	10.3
Switzerland . . . . .	47.9	24.6
Austria . . . . .	22.5	16.8
Sweden . . . . .	9.2	3.2
Denmark . . . . .	7.3	5.7
Hungary . . . . .	33.4	—
Total . . . . .	9,256.1	6,610.1
<i>Loans Repayable in Rupees:</i>		
U.S.A. . . . .	649.4	593.9
Denmark . . . . .	2.1	2.1
Total . . . . .	651.5	596.0
<i>Grants:</i>		
UN Special Fund . . . . .	17.8	3.8
U.S.A. . . . .	361.1	345.2
Colombo Plan Countries (U.K., Canada, Australia, New Zealand) . . . . .	513.0	477.7
Others . . . . .	36.0	33.6
Total . . . . .	927.9	860.3
P.L.665/P.L.480 aid, etc. . . . .	4,094.1	3,623.7
GRAND TOTAL* . . . . .	14,929.6	11,690.1

\* Totals may not add due to rounding.

Source: Europa Yearbook



Canada is shown as providing \$136.9 million in 1967. The allocation in 1969-71 and 1970-71 is \$82 million and \$83 million, respectively (CIDA Annual Review). The large amount in 1966-67 was due to extensive food relief for the drought victims in that year. The aid money is devoted to food, and development projects such as telecommunications systems, technical training programmes, agricultural improvement programmes, etc. Many of the projects financed by aid are open to public bid-dings, and Canadian exporters may compete with manufacturers of other countries. Canadian trade with India is shown in the table below:

Canadian Trade with India

(\$'000)

	<u>Canadian Exports</u>	<u>Canadian Imports</u>
1965	58,453	43,424
66	107,662	40,093
67	140,592	42,774
68	111,255	38,303
69	95,552	40,905
70	129,842	39,821

Source: DBS Trade of Canada

As can be seen from the above table, the amount of exports to India fluctuated widely while the amount of imports from India remained relatively steady. This is largely due to the fact that India's wheat requirement varies widely from year to year.

2. Market Possibilities For Canadian Exports to India

The largest item on India's imports list is unmilled wheat, which amounted to Rs 378. million (\$49 million) or 19% of total Indian imports in 1967-68. It is also the largest item in Canada's exports to India: \$41 million in 1969 and \$15 million in 1970. Other important items include non-electrical machinery, iron and steel, and electrical machinery. Of special importance is non-electrical machinery, which amounted to Rs 336 million (\$44.2 million) or 17% of total Indian imports. In this field, Canada's export of locomotives was significant, amounting to \$7.5 million in 1968 and \$4.1 million in 1969. However, a large demand for agricultural implements and construction machinery exists, and in these fields, Canada's exports to India are insignificant. In spite of expanding domestic production of small to medium engines and turbines, India



still needs a large number of these items, and Canada has been expanding its sales of turbines and engines to India over the last few years: exports in 1968 and 1969 were \$2.85 million and \$3.79 million, respectively.

As the rural electrification programme proceeds, India is expected to increase its requirements for power plants and domestic electrical appliances and fixtures.

In the Fourth Plan, the largest outlays are expected to take place in industry and minerals (Rs 5,240 crores, or \$6.9 billion), and transport and communications (Rs 4,143 crores or \$5.5 billion). Agriculture is expected to receive Rs 3,467 crores (\$4.6 billion).

The largest Canadian exports (those amounting to over \$3 million) to India are wheat (\$45.0 million in 1970), newsprint paper (\$10.2 million), sulphur (\$6.2 million), locomotives and tenders, engine and parts (\$4.1 million), copper, refinery shapes (\$6.7 million, engines, turbines and parts (\$3.2 million), and asbestos milled fibres (\$4.0 million). Detailed table is attached in appendix. Potassium chloride, muriate (\$3.3 million), prepared fertilizer mixture (\$5.0 million) lead (\$5.1 million), nickel anodes (\$7.5 million), and Zinc (\$6.4 million).

### 3. Ontario Exports to India

In 1969, Ontario domestic exports to India amounted to \$6 million, which is 6.3% of total Canadian exports (\$95.6 million). In 1970, Ontario exports were \$14 million, or 10.8% of Canadian exports.

The largest single item is nickel and alloys, amounting to \$5.1 million or 36% of the total. Engines and turbines (\$1.6 million) and iron and steel pipes and tubes (\$1.5 million) are the next in importance. Exports of iron and steel products, industrial machinery and agricultural implements, however, are very small. Considering the scope of India's requirement, the reward for efforts to expand the sale of these machines and equipment is likely to be significant. In the appendix, a detailed breakdown of Ontario's exports to India is shown.

### 4. Canadian Imports from India

Canadian imports from India amounted to \$40.9 million in 1969 and \$39.8 million in 1970. Compared to our exports, our imports are only a third as much. It is composed of light industrial products and agricultural products, while our exports are largely industrial products (except wheat and some metals).

The largest items are: cashew nuts (\$3,249.7 thousand in 1970) raw sugar (\$5,581.5 thousand), black tea (\$3,719.9 thousand), jute fabric (\$15,367.2 thousand), and genuine oriental rugs (\$1,532.1 thousand). A detailed of 1969-70 Canadian imports from India is provided in the appendix.





## 1. ECONOMIC AND TRADE POLICY

The Indian economy is a highly planned economy. It is, therefore, subject to the rigidities and bottlenecks of a planned economy, especially in an emergency situation. On the other hand, a well-concerted sales effort based on a thorough study of the Plans will result in more predictable successes.

The First Five Year Plan of 1951-52 until 1955-56 was aimed at creating a base for future rapid economic and industrial advances. Thus, emphasis was placed on the creation of social overhead frameworks such as irrigation, power, transport and communications. Also, efforts were made to provide a better climate for industrialization and economic advance by way of institutional reforms (land, social class, etc.).

The Second Plan (1956-57 to 1960-61) continued this line of action and presented the nation with a socialist pattern of society.

The Third Five Year Plan, (1961-62 to 1965-66) began taking into account long-run objectives such as self-sufficiency of foodgrains, expansion of basic industries such as steel and fertilizer, fuel and power, an increase in employment, and equitable distribution of income.

The Third Plan was followed by three Annual Plans, 1966-67, 1967-68 and 1968-69. The India-Pakistan conflict, the economic strains due to bad crops and the cumulative effect of maladjustments in the previous two Plans, together with devaluation of the Rupee in 1966, caused the planning authorities to resort to shorter term plans for the convenience of investment and target-fixing.

During the Third Plan period, output of industries expanded by 8 - 10% per year for the first 4 years, and by 4% in the last year. One important achievement of the Third Plan was the spread of education: school enrolment increased from 25 million in 1950-51 to 70 million in 1967-68.

The Fourth Plan states that the basic aims of Indian planning are the same as the Second Plan: National self-reliance and growth with social justice. The specific targets of the Fourth Plan are shown as follows:



ACHIEVEMENTS AND TARGETS

Item	Unit	1960-61 actuals	1965-66 actuals	1968-69 estimated	1973-74 targets
1	2	3	4	5	6
<b>1. Agriculture and Allied Sectors</b>					
Foodgrain production .. ..	lakh tonnes	8,20	7,20	98,0	12,90
Sugarcane (in terms of gur) .. ..	lakh tonnes	1,12	1,21	12,0	15,0
Oilseeds .. ..	lakh tonnes	70	63	85*	1,05
Cotton .. ..	lakh bales	53	48	60*	80
Jute .. ..	lakh bales	41	45	62*	74
Tea .. ..	lakh tonnes	3,21	3,65	4,18	4,50
Tobacco .. ..	lakh tonnes	3,07	2,98	3,80	4,80
High yielding varieties (area covered) ..	lakh hectares	—	—	85	2,41
Plant protection (area covered) .. ..	lakh hectares	65	1,66	5,40	8,00
Consumption of fertilisers : .. ..	thou. tonnes				
Nitrogenous (N) .. ..		2,10	5,50	14,00	37,00
Phosphatic (P <sub>2</sub> O <sub>5</sub> ) .. ..		70	1,30	4,00	18,00
Potassic (K <sub>2</sub> O) .. ..		26	80	1,80	11,00
Short and medium term loans advanced by primary co-operative credit societies ..	Rs. crores	2,02	342	4,50	7,50
Membership of agricultural co-operative credit societies ..	lakhs	1,70	2,60	3,00	4,20
Area irrigate (gross) : .. ..					
Major and medium .. ..	lakh hectares	131	152	170	212
Minor .. ..	lakh hectares	148	170	190	222
Agricultural pumpsets energised .. ..	'000 numbers	1,91.8	5,13.4	10,69	12,409
<b>2. Industry and Minerals</b>					
Steel ingots .. ..	lakh tonnes	35	65	65	1,08
Alloy and special steels .. ..	'000 tonnes	—	40	43	2,70
Aluminium .. ..	'000 tonnes	18.2	62.1	1,20	2,20
Machine tools .. ..	Rs. crores	7	29	25	65
Sulphuric acid .. ..	lakh tonnes	3.68	6.62	10.20	35
Caustic soda .. ..	lakh tonnes	1.01	2.18	3.14	5
Soda ash .. ..	lakh tonnes	1.52	3.31	3.90	5.50
Refining capacity in terms of crude throughput .. ..	lakh tonnes	60.92	97.5**	161.3**	260
Petroleum, crude .. ..	lakh tonnes	4	30	58	97
Paper and paper board .. ..	lakh tonnes	3.5	5.7	6.4	9.6
Plastics .. ..	'000 tonnes	9.5	31	53	2,10
<b>3. Fertiliser Production</b>					
Nitrogenous (N) .. ..	lakh tonnes	1.01	2.32	5.50	30
Phosphatic (P <sub>2</sub> O <sub>5</sub> ) .. ..	lakh tonnes	0.53	1.23	2.2	15
<b>4. Cement</b> .. ..					
lakh tonnes		80	1,08	1,25	1,80
<b>5. Cloth</b>					
Mill made .. ..	crore metres	464.9	440.1	440.0	510.0
Man-made fibre fabrics .. ..	crore metres	546**	870**	975	150.0
Handloom, powerloom and khadi .. ..	crore metres	206.7	314.1	340.0	425.0
<b>6. Minerals</b>					
Iron ore .. ..	crore tonnes	1.1	2.45	2.6	5.3
Coal (excluding lignite) .. ..	crore tonnes	5.57	6.77	6.95	9.35
<b>7. Electricity</b>					
Installed capacity .. ..	lakh W.	56	1,02	1,45	2,20
<b>8. Transport</b>					
Railway freight carried .. ..	crore tonnes	15.6	20.3	20.3	26.5
Surface roads .. ..	lakh km.	2.36	2.87	3.17	3.67
Commercial vehicles on road .. ..	lakh Nos.	2.25	3.33	3.80	5.85
Shipping tonnage .. ..	lakh GRT	9	15	21	35
<b>9. Education</b>					
General education : .. ..					
Students in schools .. ..	lakh Nos.	4,47	6,48	7,52	9,72
Technical Education .. ..					
admission capacity .. ..	'000 Nos.				
Degree .. ..		13.8	24.7	25.0	25.0
Diploma .. ..	'000 Nos.	25.8	48.0	48.6	48.6
<b>10. Health and Family Planning</b>					
Hospital beds .. ..	'000 Nos.	185.6	240.1	255.7	281.6
Doctors practising .. ..	'000 Nos.	70.0	86.0	102.5	137.9
<b>11. Family Planning Centres</b>					
Rural .. ..	numbers	1,100	3,676	4,840	5,225
Urban .. ..	numbers	549	1,331	1,856	1,856

\*Base level.

\*\*Relates to calendar year.



In order to achieve these goals, the Plan visualizes an outlay of Rs 24,398 crores (approximately \$32 billion). The largest sum goes to industrial and mining development, followed by transport and communication. Agriculture receives the third largest sum (Rs 4,017 crores, or \$5.3 billion). The details are shown in the following table.

OUTLAY AND INVESTMENT IN FOURTH PLAN : PUBLIC AND PRIVATE SECTORS

(Rs. crores)

Sl. No.	Head of Development	Public Sector				Private Sector		Total Investment (4+6)	Public and Private Sectors	
		Total outlay	Current outlay	Investment	Percentage of total outlay	Investment	Percentage distribution		Total outlay (2+6)	Percentage distribution
	1	2	3	4	5	6	7	8	9	10
1.	Agriculture and Allied Sectors .. ..	2,217	550	1,667	15.4	1,800	18.0	3,467	4,017	16.5
2.	Irrigation and Flood Control .. ..	964	14	950	6.7	..	..	950	964	3.9
3.	Power .. ..	2,085	—	2,085	14.4	50	0.5	2,135	2,135	8.7
4.	Village and Small Industries .. ..	295	111	184	2.1	500	5.0	684	795	3.3
5.	Industry and Minerals .. ..	3,090	35	3,055	21.5	2,150	21.5	5,205	5,240	21.5
6.	Transport and Communications .. ..	3,173	40	3,133	22.0	1,010	10.1	4,143	4,183	17.2
7.	Education .. ..	802	539	263	5.6	50	0.5	313	852	3.5
8.	Scientific Research .. ..	134	41	93	0.9	..	..	93	134	0.5
9.	Health .. ..	437	305	132	3.0	..	..	132	437	1.8
10.	Family Planning .. ..	300	250	50	2.1	..	..	50	300	1.2
11.	Water Supply and Sanitation .. ..	339	2	337	2.4	..	..	337	339	1.4
12.	Housing and Urban Development .. ..	171	—	171	1.2	2,680	26.8	2,851	2,851	11.7
13.	Welfare of Backward Classes .. ..	134	134	—	0.9	..	..	..	134	0.5
14.	Social Welfare .. ..	37	37	—	0.3	..	..	..	37	0.2
15.	Labour Welfare and Craftsmen Training ..	37	18	19	0.3	..	..	19	37	0.2
16.	Other Programmes .. ..	183	70	113	1.2	..	..	113	183	0.7
17.	Inventories .. ..	—	—	—	—	1,760	17.6	1,760	1,760	7.2
18.	Total .. ..	14,398	2,146	12,252	110.0	10,000*	100.0	22,252	24,398	100.0

\*Exclusive of transfers of public funds.

The most significant aspect of the 1970-71 budget was that it left the private sector largely unaffected, despite the socialistic tone of the Fourth Plan. In fact, the private sector was helped in some measure by the increase in the amount of income tax exemption from Rs 2,000 to Rs 3,000, though entertainment expenditures were made taxable, and minimum wealth tax was increased from 1% to 5% on urban property.

## 2. Import Policy and Channels of Sales Promotion

The emphasis in trade policy continues to be on achieving import-substitution, while persuing export expansion to increase foreign exchange earnings. Industrial units which export over 10% of their production will be given preferred sources of supply and facilities for expansion. Free foreign exchange reserves have been accumulated to meet part of the requirements of priority export units for the purpose of: expansion of production capacity, technical and managerial improvement, etc.





To foster domestic industries, there is a long list of items under import restriction. Some of the more important items are enumerated in the section dealing with "the analysis of Indian imports". State Trading Corporations are in charge of "canalizing" the distribution of commodities which are strategically important to economic development. Among the commodities which are "canalized" by STC are copra, soyabean oil, mutton tallow, cork wood, sodium nitrate, palm oil, sulphur products, vitamins, antibiotics and natural rubber. The STC acts as agents for the purchase of certain raw materials, such as carbon black, aluminum oxide, phosphoric acid, titanium dioxide, cellulose acetate, etc. Bulk imports of raw materials, spare parts and chemicals are authorized for state-sponsored corporations. These goods will then be distributed to various end-users. A few selected goods, such as medicines, textbooks, technical books, hearing aids, slide rules, etc. will be imported by the National Cooperative Consumers Federation for distribution through Consumer Cooperative Stores.

In India, the most important channels of sales promotion for consumer goods are newspapers, magazines and radio. There are 636 dailies, 2,892 weeklies, 3,997 monthlies. Radio sets are one of the most popular communal gathering spots in many Indian villages.

For the sale of intermediate and capital goods, direct contact with the users is essential, in addition to a working knowledge of foreign aid programmes and projects approved by the planning authority. In the appendix, a list of top Indian companies, showing their names, their main products and their performance in 1970, is included.

### 3. Licensing, Joint Venture, Patents

Industries are classified into three broad categories concerning the degrees of foreign participation.

Category 1. (List 1A): both foreign equity and technical assistances are permitted. This includes certain fertilizers, pesticides, offshore oil exploration, petrochemicals, thermo-plastics, synthetic rubber, certain pharmaceuticals, synthetic fibres, particle board, refractors, specialized industrial machinery, cast iron and steel, typewriters, business machines (including data-processing machines), earthmoving equipment, plateglass, and some electric machinery.

Category 2. (List 1B): only technical assistance and no foreign equity is allowed. The royalty ceiling is 3% for most industries, and for some products, a 5% ceiling is imposed. This category includes a large number of products



related to paper, rubber goods, chemicals, asbestos, carbon, timber, electrical engineering products, industrial machinery, metallurgical equipment, tools and other products.

Category 3. (List II): neither technical assistance nor equity participation is permitted. It covers a score or so specific industrial products.

Before 1968, foreign investments are handled by a number of separate agencies. But the Foreign Investment Board, established in 1968, unifies the administrative and supervisory function. In addition, the FIB is attempting to deal with all applications within 3 months.

India has effective legislation to protect patents, copyrights, and trademarks. A brief description of patent and trademark laws and procedures, published in Investing, Licensing and Trading Conditions Abroad (by Business International, December 1969), is shown below:



## Major Indian Manufacturing Companies

	Industry	Net worth (R millions)*	Sales (R millions)*	% change 1969-70/ 1968-69	Pre-tax profits (R millions)*	% change 1969-70/ 1968-69	1969-70 Profits to sales (%)	1969-70 Profits to net worth (%)
1	2	3	4	5	6	7	8	9
Tata Iron & Steel Co	Iron, steel	974	1,262	7.9	111.6	14.8	8.8	11.5
Hindustan Lever <sup>1</sup>	Food, soap, oil	193	1,020	18.0	66.1	3.8	6.5	34.2
Indian Iron & Steel Co	Iron, steel	644	924	15.6	20.1	-34.3	2.2	3.1
Tata Engineering & Locomotives Co <sup>2</sup>	Engineering	302	893	-7.0	23.5	-57.4	2.6	7.8
Delhi Cloth & General Mills Co	Textiles, fertilizer, sugar, rayon	257	889	23.4	36.6	1.7	4.1	14.2
Brooke Bond India <sup>3</sup>	Tea	123	685	3.6	47.7	67.4	7.0	38.8
India Tobacco <sup>4</sup>	Tobacco	360	648	13.3	78.2	6.9	12.0	21.7
Dunlop India <sup>5</sup>	Tires, rubber products	201	644	15.8	69.9	16.3	10.9	34.8
Associated Cement Cos	Cement	405	637	4.0	36.3	-24.1	5.7	9.0
Gwalior Rayon Silk Manu- facturing (Weaving) Co	Textiles, staple fiber	224	543	6.9	74.6	26.0	13.7	33.3
Hindustan Motors	Automobiles	255	402	3.6	-4.2	-134.1	—	—
Union Carbide India <sup>6</sup>	Plastics, batteries	182	387	28.8	56.4	34.0	14.6	31.0
Scindia Steam Navigation Co	Shipping	265	357	17.5	31.2	3.3	8.7	11.8
Voltas	Trading, engineering	75	587	-3.0	0.4	-97.9	0.6	0.5
Century Spinning & Manufacturing Co	Textiles, rayon	186	418	7.0	89.5	37.3	21.4	48.1
Binny <sup>7</sup>	Textiles, engineering	110	383	0.6	6.5	41.7	1.7	5.9
Tata Oil Mills Co	Oil, soap, food	47	360	33.3	14.7	16.7	4.1	31.3
Hindustan Aluminium <sup>8</sup>	Aluminum	295	343	31.4	65.0	5.0	18.9	2.2
Esso Standard Refineries <sup>9</sup>	Petroleum	212	339	0.4	34.8	13.0	10.3	16.4
Calico Mills	Textiles, PVC	98	321	13.8	22.0	15.8	6.9	22.4
Guest, Keen, Williams <sup>10</sup>	Engineering	169	320	8.5	24.4	34.2	7.6	14.4
E.I.D. Parry <sup>11</sup>	Sugar, confectionery, fertilizer, trading	79	311	9.4	6.8	-72.9	2.2	8.6
Premier Automobiles	Automobiles	61	302	12.8	-9.6	26.2	—	—
Calcutta Electric Supply <sup>12</sup>	Electricity supply	319	298	2.5	21.4	-32.5	7.2	6.7
Escorts	Engineering, tractors	57	280	36.4	21.5	22.9	7.7	37.7
Philips India <sup>13</sup>	Electronics, lamps	86	280	13.5	52.6	12.9	18.8	61.2
Oil India <sup>14</sup>	Petroleum	388	272	4.3	108.3	-3.8	39.8	28.0
General Electric Co <sup>15</sup>	Electrical goods, radios	78	268	—	9.1	64.0	3.4	11.7
Ashok Leyland <sup>16</sup>	Automobiles	114	265	11.7	21.3	23.8	8.0	18.7
Metal Box Co <sup>17</sup>	Containers	98	265	4.6	13.3	29.3	5.0	13.6
Mahindra & Mahindra	Engineering, trading	57	265	22.1	9.3	257.7	3.5	16.3
Indian Aluminium Co <sup>18</sup>	Aluminum	279	254	25.1	53.9	28.8	21.2	19.3
Orient Paper Mills	Paper	159	254	25.6	48.7	8.2	19.2	30.6
Indian Tube Co	Seamless tubes & pipes	116	247	1.7	23.4	36.8	9.5	20.2
Coromandel Fertilizer <sup>19</sup>	Fertilizer	57	246	116.9	-6.2	16.0	—	—
Birla Jute Mfg. Co	Jute, cement	120	243	7.2	30.5	84.8	12.5	25.4
Gujarat State Fertilizers Co	Petrochemicals, fertilizer	128	241	43.9	25.2	24.1	10.5	19.7
Mafatlal Fine Spinning & Mfg. Co	Cotton textiles, chemicals	79	239	16.3	9.3	57.6	3.9	11.8
Kirloskar Oil Engines	Diesel engines	80	234	5.1	22.1	-42.1	9.4	27.6
Standard Mills Co	Cotton textiles, chemicals	71	220	24.7	17.9	83.8	8.1	25.2
Larson & Toubro	Engineering, trading	70	223	-1.5	13.9	20.9	6.2	19.9
Kesoram Industries	Textiles, rayon, cement	100	213	-13.8	4.1	-50.6	1.9	4.1
Indian Explosives <sup>20</sup>	Industrial explosives, fertilizer	250	152	8.9	32.9	18.8	21.6	13.2
National Organic Chemical Industries (NOCIL) <sup>21</sup>	Petrochemicals	73	149	121.4	-16.1	52.3	—	—





## Patents and Trademarks in India

**Conventions.** Reciprocal arrangements for the protection of inventions and designs (12 months for patents, six months for designs) exist with Australia, the UK, Ireland, New Zealand, and Pakistan; for inventions only with Canada and Ceylon.

### PATENTS

**Basic laws.** The Indian Patents and Designs Act, 1911, amendments pending.

**Kinds and duration.** Ordinary patents, priority patents, patents of addition, secret patents (government), and communications patents. Patents of addition, unexpired term of main patent; others, 16 years from date of filing or priority (extensions may be possible).

**Novelty.** No prior public use or knowledge in India.

**Unpatentable.** No special restrictions against food or medicine; chemical compounds allowable only when made by the processes claimed.

**Filing Procedure.** Complete specification in English, in duplicate to Controller of Patents and Designs in Calcutta; claims drafted in the manner acceptable in the UK preferred.

**Fees.** Application fee, when filed with complete specification, R30; sealing fee R30; renewal fees beginning in fifth year, R50 for four years, R100 for next four, and R150 for remaining four.

**Compulsory licensing.** Patents must be worked within three years of sealing (nominal working would include advertisement and/or direct letters to potential licensees). Compulsory license can be granted if patent not worked or if abused—for food, medicine, insecticides, germicides, fungicides, or surgical devices, compulsory patents can always be applied for.

### TRADEMARKS

**Basic law.** The Trade and Merchandise Marks Act, 1958-1959, and Rules, 1959-1963.

**Duration.** Seven years, renewable indefinitely. Mark cancelled if not used for five years.

**Legal effects.** First user is entitled to registration; no protection for unregistered mark.

**Registrability.** Marks must be distinctive and not deceiving or contrary to law.

**Filing procedure.** Application in triplicate for each class of goods to Registrar of Trademarks in Bombay. Acceptance is published in Trademarks Journal and opposition has three months to file.

**Fees.** For the first class: on application R30; on registration R60; renewal, R60.

### INDUSTRIAL DESIGNS AND MODELS

Designs are registrable for five years, renewable for two like periods. Application fee is R3, renewal R10.



Table I

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## CANADIAN IMPORTS FROM INDIA BY COMMODITIES

C O D E	COUNTRY AND COMMODITY		JANUARY TO DECEMBER 1969		JANUARY 1969		APRIL 1969		C O D E
			QUANTITY	VALUE	QUANTITY	VALUE	QUANTITY	VALUE	
				\$		\$		\$	
<b>INDIA</b>									
999	LIVE ANIMALS N E S			3,509			4,256		999
4469	FISH AND FISH PRODUCTS, CANNED NES	CWT N			5		423		4469
4649	SHRIMPS AND PRAWNS, FRESH OR FROZEN	CWT	14	970	244		23,060		4649
4685	SHRIMPS AND PRAWNS, CANNED	CWT N			842		87,314		4685
4699	SHELLFISH AND PRODUCTS N E S	CWT	96	6,310	136		9,003		4699
6149	RICE, CLEANED	CWT	240	4,825	297		3,747		6149
6659	MACARONI PRODUCTS, INCL. NOODLES	LB			220		135		6659
6699	CEREAL PRODUCTS N E S	LB			1,496		497		6699
6999	FARINACEOUS SUBSTANCES N E S	LB			2,681		727		6999
7399	FRUITS AND BERRIES, DRIED N E S	LB	3,708	1,236	1,703		734		7399
7459	FRUIT JUICES, NOT CONCENTRATED NES	GAL	72	101					7459
7659	FRUITS IN LIQ PRESER NOT CANNED NES	LB	10,424	2,669	8,431		1,934		7659
7899	FRUITS AND PRODUCTS, CANNED N E S	LB	90,744	26,921	52,541		13,382		7899
8225	CASHEW NUTS, SHELLD OR ROASTED	LB	4,620,308	3,005,100	4,782,970		3,249,674		8225
8280	WALNUTS, SHELLD OR ROASTED	LB	1,576,396	893,208	67,317		33,961		8280
8299	NUTS KERNELS SEEDS SHELLD PREP NES	LB	44,400	22,041	45,697		16,621		8299
9312	BEANS, DRIED N E S	LB	24,394	3,191	71,149		10,861		9312
9399	VEGETABLES, DRIED N E S	LB			1,831		897		9399
9899	VEGETABLES & VEG JUICES, CANNED NES	LB	9,851	1,941	17,154		3,471		9899
9915	PICKLES PACKAGED FOR RETAIL SALE	LB N	32,793	8,540	48,770		17,717		9915
9920	PICKLES N E S	LB N	7,561	1,510	9,861		1,640		9920
9970	SAUCES N E S	LB N			600		306		9970
9999	RELISHES, DRESSINGS AND SPREADS NES	LB N	33,627	10,673	96,918		31,762		9999
10119	RAW SUGAR	CWT			1,298,657		5,581,457		10119
10170	MOLASSES, CANE OR BEET	GAL			1,000,000		191,065		10170
11210	COFFEE, GREEN	LB	311,252	106,689	104,368		53,424		11210
11310	TEA, BLACK	LB	7,445,990	3,620,394	7,636,015		3,719,881		11310
11425	GINGER, GROUND OR UNGROUND	LB	84,568	37,079	73,910		52,603		11425
11455	PEPPER, GROUND OR UNGROUND	LB	1,822,413	581,923	1,923,542		943,650		11455
11469	PIMENTO, GROUND OR UNGROUND	LB	1,050	355	494		247		11469
11499	SPICES, SPICE HERBS SPICE SEEDS NES	LB	127,300	66,484	288,740		139,906		11499
14640	FLAVOURING EXTRACTS AND ESSENCES	LB	353	312	264		108		14640
14699	FOOD PREPARATIONS N E S	LB	17,753	8,099	26,916		9,738		14699
18330	CIGARS AND SIMILAR PRODUCTS	M			400		727		18330
20209	FUR SKINS, UNDRESSED N E S	NO	600	1,505	1,737		2,566		20209



Class	COUNTRY AND COMMODITY		JANUARY TO DECEMBER 1969		JANUARY TO DECEMBER 1970		Class
			QUANTITY	VALUE	QUANTITY	VALUE	
				\$		\$	
20529	FEATHERS, DOWNS AND QUILLS	LB	285	954	180	919	20529
20549	ANIMAL BRISTLES AND HUMAN HAIR	LB			150	880	20549
20976	ANIMAL MATERIALS USED IN MFG DRUGS					8,495	20976
20999	CRUD ANIMAL AND FISH PROD INCL NES					1,264	20999
21199	SEEDS FOR SOWING N E S	LB	123,892	67,645	135,806	108,019	21199
21249	PLANTS, GREEN	CWT	91,902	1,501,878	1,093	21,605	21249
21760	LAC, INCL. BLEACHED, CRUDE SHELLAC	LB	573,100	89,372	238,951	47,440	21760
21799	NATURAL GUMS AND RESINS N E S	LB	954,335	58,927	1,060,271	70,031	21799
21974	CRUDE HERBS & PLANT PT FOR MEDICINE			11,697		10,936	21974
21999	CRUDL VEG. MATERIALS INEDIBLE N E S			7,443		38,152	21999
24219	WOOL, SCOURED OR WASHED	LB	22,627	12,942			24219
24410	RAW COTTON	LB	124,817	36,675	121,992	34,231	24410
24499	COTTON WASTE N E S	LB	2,869,890	159,758	680,297	32,306	24499
24550	SISAL AND AGAVE FIBRES, INCL. WASTE	LB			27,990	3,446	24550
24599	VEGETABLE TEXTILE FIBRE & WASTE NES	LB	1,841,668	162,137	869,355	102,825	24599
24619	VISCOSE AND ACETATE RAYON WASTE	LB	218,208	28,529	140,883	15,398	24619
24698	MAN-MADE FIBRES N E S	LB	1,711	1,270	6,397	3,097	24698
25210	BAUXITE ORE	CWT	313,600	81,418	602,180	153,917	25210
25840	MANGANESE IN ORES AND CONCENTRATES	CWT			218,269	422,195	25840
27299	CRUDE REFRACTORY MATERIALS N E S	CWT	3,090	7,608			27299
27610	GRANITE, ROUGH	TON			91	4,559	27610
29119	TEXTILE RAGS N E S	CWT	1,644	7,906	5,373	28,390	29119
29199	WASTE MATERIALS N E S	CWT			110	28,403	29199
30299	SHOE LINING LEATHER N E S	SQ FT			1,000	301	30299
30499	GLOVL AND GARMENT LEATHER N E S	SQ FT			534	645	30499
30699	LEATHER N E S	SQ FT	120,455	44,208	79,805	26,969	30699
31089	FURS, DRESSED N E S			501		1,583	31089
33490	DIMENSION-SAWN STOCK					5,556	33490
33519	VENEER, HARDWOOD N E S	SQ FT	13,903	988			33519
33559	PLYWOOD, HARDWOOD N E S	SF 1/4	10,792	2,320			33559
35299	FINI PAPER N E S	CWT	32	1,473			35299
36405	COTTON THREAD FOR SEWING	LB	1,120	2,290	12,112	16,919	36405
36445	COTTON YARN SINGLE 20 AND UNDER NES	LB			1,764	800	36445
36446	COTTON YARN SINGLE OV 20 UND 40 NES	LB			2,169	1,166	36446
36447	COTTON YARN SINGLE 40 AND FINER NES	LB			6,671	6,635	36447
36468	COTTON YARN, PLIED N E S	LB	53,953	21,008	61,925	26,623	36468
36499	COTTON YARN AND THREAD N E S	LB	25,684	7,423	19,511	5,878	36499
36505	JUTE YARN, SINGLE	LB	450,411	141,954	205,836	45,001	36505
36549	VEGETABLE FIBRE YARN AND THREAD NES	LB	228,158	22,862	26,480	3,275	36549
36639	NYLON YARN	LB			4,343	3,323	36639
37149	BROAD WOVEN FABRICS, SILK	LB	13,417	94,499	6,099	58,515	37149
37218	WORSTED FAB ALL WOOL 9 OZ AND LESS	LB	78,201	229,857	120,866	332,887	37218
37302	DUCK AND ALLIED FABRICS, COTTON	LB	1,026,841	451,761	353,797	161,525	37302
37313	DRILL TWILL WARP SATEEN COTTON UNBL	LB	116,686	54,300	4,939	2,044	37313
37315	DRILL TWILL WARP SATEEN COT BLEACHD	LB	99,223	73,695	738	494	37315
37318	DRILL TWILL WARP SATEEN COT COLORED	LB	108,599	68,490	47,389	29,587	37318
37322	CHEFSE BANDAGE TORACCO CLOTH COTTON	LB	9,181	12,051	8,203	6,676	37322
37343	PRINT CLOTH & SHEETING COTTON UNBL	LB	367,666	185,102	289,319	146,495	37343
37345	PRINT CLOTH & SHEETING COT BLEACHD	LB	118,804	101,112	65,140	52,740	37345
37348	PRINT CLOTH & SHEETING COT COLORED	LB	320,410	239,689	262,489	169,233	37348
37354	FLANNEL HAPPED FABRIC COT UNBL & BL	LB	194,673	102,806	119,834	68,029	37354
37358	FLANNEL HAPPED FABRIC COTTON COLORED	LB	254,414	168,761	62,935	42,845	37358
37362	DENIMS, COTTON	LB	7,672	6,621	14,993	10,243	37362
37372	TWEEDING, COTTON, EXC. TERRY CLOTH	LB	34,122	23,326	2,465	2,029	37372
37386	TERRY CLOTH, COTTON	LB	113,022	78,831	23,814	14,423	37386
37389	PILE FABRICS, COTTON N E S	LB	171	941			37389
37393	BROAD WOVEN FABRICS COTTON UNBL NES	LB	153,573	73,906	126,208	51,851	37393
37395	BROAD WOVEN FABRICS COTTON BL N E S	LB	2,593	3,173	4,248	3,853	37395
37398	BROAD WOVEN FABRICS COT COLORED NES	LB	557,016	338,346	1,002,468	618,660	37398
37404	JUTE BROAD WOVEN FAB. UP TO 50 IN.	LB	44,048,023	9,311,388	42,584,921	9,087,379	37404
37408	JUTE BROAD WOV. FAB. OV. 50 TO 100	LB	7,749,868	1,705,241	6,970,323	1,522,404	37408
37412	JUTE BROAD WOVEN FAB. OVER 100 IN.	LB	31,816,090	9,032,606	17,532,103	4,757,471	37412
37509	PILE FABRICS OF ONE MAN-MADE FIBRE	LB	3,110	4,213	1,022	1,605	37509
37519	RAYON BROAD WOVEN FABRICS	LB	1,114,409	943,519	918,555	792,670	37519
37539	NYLON BROAD WOVEN FABRICS	LB	15,227	27,527	75,081	144,889	37539
37708	WOOLLEN FAB. WOOL MIX 9 OZ. & LESS	LB	510	1,832	14,481	50,141	37708
37739	BROAD WOVEN FAB. WOOL MIXTURES NES	LB	29,387	94,060	32,819	87,994	37739
37765	RAYON-POLYESTER BROAD WOVEN FAB NES	LB			1,361	3,019	37765
37767	RAYON MAN-MA MIX. BROAD WOV FAB NES	LB	636	1,527			37767
37769	RAYON MIXTURE BROAD WOVEN FAB. NPS	LB	9,387	6,445	17,771	15,765	37769
37771	POLYESTER-COT LIGHTWEIGHT WOV FAB	LB			81	433	37771
38319	BRADIS, NON-ELASTIC	LB	60	1,129			38319
38342	WOV NAT FAB VEG FIBRE NON-ELAST NES	LB	30,911	8,889	143,313	43,316	38342
38344	WOV NAT FAB, MAN-MA NON-ELASTIC NES	LB	298	585			38344
38349	WOVEN NARROW FABRIC NON-ELASTIC NES	LB			100	296	38349
38609	LACE FABRICS	LB	43	1,116			38609
38619	EMBROIDERED AND ORNAMENTED FABRICS	LB	4,153	20,255	4,401	14,730	38619
38760	FAB. COATED WITH STARCH OR OLEATES	LB			6,788	3,263	38760
38999	TEXTILE FABRICATED MATERIALS N E S			20,675		25,667	38999
39299	VEGETABLE OILS AND FATS N E S	CWT	21	687	5	240	39299
39699	NATURAL TANNING & DYE EXTRACTS NES	LB	184,090	61,233	158,685	74,301	39699
39739	ESSENTIAL OILS N E S	LB			937	3,443	39739
40599	INORGANIC CHEMICALS N E S			32,381		286,861	40599
41125	AMINE FUNCTION COMPOUNDS N E S	CWT	2	566			41125
41159	AMIDE FUNCTION COMPOUNDS	CWT			7	694	41159
42547	DEFORM. LAMINATED PLAST. PAPER BASE	CWT			40	6,192	42547
42620	DYEING AND DEVELOPED DYE-STUFFS	LB	2,700	4,173	560	973	42620
42672	REACTIVE DYE-STUFFS	LB			2,205	4,698	42672
42709	ORANGE AND YELLOW PIGMENTS	LB	10,080	13,509			42709





COUNTRY	COUNTRY AND COMMODITY	JANUARY TO DECEMBER 1959		JANUARY TO DECEMBER 1960		COUNTRY
		QUANTITY	VALUE	QUANTITY	VALUE	
42749	TEXTILE PIGMENTS EXCEPT SPIN DYING LB			11,001	12,981	42749
43950	PARAFFIN WAX, CRUDE LB					43950
44450	BARB, CARBON STEEL, COLD FINISH NES CWT	669,546	31,578			44450
44505	SHEET & STRIP CARB STEEL GALVANIZED CWT			899	6,741	44505
44807	PIPES AND TUBES OF CAST IRON, NEW CWT	423	2,523	188	5,917	44807
44838	PIPES & TUBES, CS, WELDED, NEW NES CWT	1,466	14,911			44838
44979	WIRE ROPE, NEW, COATED OR NOT CWT	2,900	17,428	275	1,521	44979
45109	ALUMINUM PIGS INSULTS SHOT SLABS ETC CWT			76	1,735	45109
45132	ALUMINUM FOIL OR LEAF CWT	12,202	291,848			45132
45149	ALUMINUM & ALLOY FABRICATO MAT. NES	2,507	116,537			45149
46525	WASHERS, METAL		5,058		3,000	46525
46556	PADLOCKS, INCLUDING KEYS		5,644		507	46556
46562	LOCKS AND KEYS N E S		3,517			46562
46569	BUILDERS HARDWARE N E S		400			46569
46599	BASIC HARDWARE N E S		1,441		2,664	46599
46899	PIPE FITINGS IRON STEEL FINISH NES		277		4,051	46899
46928	METAL PARTS FOR JEWELLERY N E S				1,148	46928
46999	METAL FABRICATED BASIC PRODUCTS NES		140		493	46999
47299	REFRACATORIES N E S				361	47299
47399	CLASS BASIC PRODUCTS N E S		169		878	47399
47654	ABRASIVE WHEELS		640		21,875	47654
47804	GEM DIAMONDS, CUT BUT UNSET CARAT	652	64,067	967	84,942	47804
47825	GEM AND ORNAMENTAL STONES N E S		110,945		124,098	47825
47933	MICA BLOCKS SHEETS AND GROUND MICA CWT	125	3,342	223	10,470	47933
47936	MICA, FABRICATED N E S		263			47936
49620	VEGETABLE BRUSH FIBRES, PROCESSED		15,351		7,520	49620
49644	WIPING RAGS		2,009			49644
50218	DIESEL AND SEMI-DIESEL ENGINES NES NO			1	1,260	50218
50409	PARTS OF BALL BEARINGS N E S		300			50409
50444	GEARS, POWER TRANSMISSION		454			50444
50711	AIR AND GAS COMPRESSORS, STATIONARY NO	1	5,260	121	93,439	50711
50736	AIR & GAS COMPRESSOR PARTS & ACCESS				2,497	50736
52302	DRILLING MACHY, METALWORKING & PTS NO			1	4,595	52302
52303	METAL BORING DRILLING MACHY & PARTS NO	15	71,689			52303
52305	METAL GRINDING MACHINES AND PARTS NO	5	38,738	12	11,980	52305
52307	LATHES, METALWORKING, TURRET N E S NO	17	90,766	8	53,417	52307
52308	LATHES, METALWORKING, AND PARTS NES NO	36	94,809	24	64,176	52308
52309	METAL MILLING MACHINES AND PARTS NO	3	16,628	15	55,364	52309
52315	PRESSES, METALWORKING, AND PARTS NO	11	23,988	3	6,772	52315
52345	ELECTRIC WELDING APPARATUS & PARTS				1,194	52345
52386	DRILLS TAPS BITS METALWRK MACHY NES		76,929		98,072	52386
52396	CUTTING TOOLS FOR METALWRK MACH NES				378	52396
52559	PAPER MILL MACHINERY AND PARTS NES				52,862	52559
52760	SEWING MACHINES INDUSTRIAL & PARTS NO				249	52760
57699	PARTS FOR RAILWAY ROLLING STOCK NES		1,022			57699
58999	PARTS & ACCESS. FOR MOTOR VEH. NES		924		1,914	58999
61108	BICYCLES	2,000	17,600			61108
61120	PARTS AND ACCESS. FOR BICYCLES NES		28,611		4,957	61120
62129	TIRES, BICYCLE MOTORCYCLE PNEU. NEW NO	15,000	7,375	900	560	62129
63475	TAPE PLAYERS, TAPE RECORDERS EXC PT NO			1	213	63475
63790	PHONOGRAPH RECORDS AND BLANKS	9,000	12,791	4,237	6,877	63790
68143	INCANDESCENT LIGHTING FIXT & LAMPS		1,210		2,872	68143
68178	FLASHLIGHTS, PENLIGHTS AND PARTS NO		2,202			68178
68199	ELECTRIC LIGHTING FIXT & PARTS NES		1,899		2,314	68199
68290	PARTS FOR ELECTRIC LAMPS N E S		392			68290
70217	ELEC. PROPERTY MEASURING INSTR & PT				744	70217
70290	ELEC. MEASURING & TESTING INSTR NES		1,542		7,470	70290
70325	THERMOMETERS	111,600	14,626	56,000	4,314	70325
70609	PHISTOLOGICAL MONITORING EQUIPMENT				721	70609
70631	SURGICAL INSTRUMENTS OF STEEL & PTS				2,140	70631
70645	HOSPITAL EQUIP UTENSILS ACCESS & PT		270			70645
70689	HOSPITAL EQUIPMENT AND PARTS N E S				202	70689
70710	OPTICAL MICROSCOPES & PTS EXC LENS NO		1,392			70710
70890	SCALES AND BALANCES AND PARTS N E S NO				6,710	70890
70949	PHYSICAL PROP TEST EQUIP & PTS NES		340		1,072	70949
70997	MODELS FOR DEMONSTRATION ETC. & PTS		11,857		6,784	70997
74012	FURNITURE, WOODEN, HHOLD, NOT UPHOL		37,893		47,378	74012
74014	FURNITURE, METAL, HHOLD, NOT UPHOL		626		1,389	74014
74019	FURNITURE FRAMES & HHOLD FURN. NES		1,653		3,152	74019
74039	FURNITURE, SPECIAL PURPOSE N E S		368		247	74039
74074	WINDOW SHADES AND BLINDS		132			74074
74076	PICTURE AND PHOTOGRAPH FRAMES			153	401	74076
75102	POWER DRIVEN HAND DRILLS & TAPPERS	1,165	23,549	1,222	21,686	75102
75190	POWER DRIVEN HAND TOOLS N E S	488	13,051	1,071	30,998	75190
75198	PARTS OF POWER DRIVEN HAND TOOLS				5,116	75198
75204	FILES AND RASPS	1,130	2,444	113	1,456	75204
75229	HAND SAWS, SAW BLADES & SAW PTS NES				323	75229
75256	AUGERS, BITS, BRACES, HAND DRILLS		8,627		8,047	75256
75299	EDGE TOOLS, HAND, AND PARTS N E S		971		6,151	75299
75425	METAL RULES, SCALES, TAPES & PARTS				6,358	75425
75449	MECHANICS MEASURING TOOLS & PTS NES				1,290	75449
75532	ANVILS, VISES AND PARTS		2,161		3,148	75532
75536	WRENCHES AND PARTS		7,664		44,054	75536
75554	PLIERS			138	969	75554
75589	HAND TOOLS AND PARTS N E S		5,227		4,539	75589
75823	HUNTING KNIVES		1,815	887	867	75823
75899	CUTLERY N E S	647	4,190		0,895	75899
76389	NON-ELEC CLEANING EQUIP & PARTS NES		1,640		785	76389
78199	SLEEPWEAR N E S	2,400	1,683	6,600	4,714	78199



CLASS	COUNTRY AND COMMODITY		JANUARY TO DECEMBER 1969		JANUARY TO DECEMBER 1970		CLASS
			QUANTITY	VALUE	QUANTITY	VALUE	
				\$		\$	
78314	BLouses, EXCEPT KNITTED N E S	NO	116	717	199	1,978	78314
78317	OUTDOOR JACKETS	NO	38	761	220	646	78317
78318	OVERCOATS AND TOPCOATS	NO	100	304			78318
78323	DRESSES, COTTON, EXCEPT KNITTED	NO	6,493	22,618	29,411	75,322	78323
78324	DRESSES, MAN-MADE FIBRE, EXC. KNIT.	NO			696	4,145	78324
78325	DRESSES, EXCEPT KNITTED N E S	NO	889	15,806	3,504	30,255	78325
78332	PANTS, MENS AND BOYS, WOOL	NO			63	255	78332
78333	PANTS, MENS AND BOYS, COTTON	NO	19,953	24,561	30,290	35,543	78333
78341	SHIRTS, COTTON, EXCEPT KNITTED	NO	3,094	6,342	6,443	12,036	78341
78344	SHIRTS POLYESTER-COT BLEND EXC KNIT	NO			100	142	78344
78345	SHIRTS, MAN-MADE FIBRES EXC. KNIT NES	NO			110	237	78345
78347	SHIRTS, EXCEPT KNITTED N E S	NO	240	508	1,709	3,456	78347
78349	SKIRTS, EXCEPT KNITTED	NO			276	1,893	78349
78352	PANTS SLACKS WOMENS CHILDS EXC KNIT	NO			22	290	78352
78369	SUITS, FINE SLACK & SPORT, EXC KNIT	NO	139	2,084	143	1,609	78369
78390	SCARVES SHAWLS STOLDS OF WOVEN FAB.	NO	23,593	35,263	214,242	199,352	78390
78395	OUTERWEAR SETS WOMEN GIRLS EXC KNIT	NO	27	788	150	629	78395
78399	OUTERWEAR, EXCEPT KNITTED N E S	NO	27,022	29,534	55,214	84,898	78399
78470	SWATEERS CARDG KNIT WOOL MENS BOYS	NO	323	681			78470
78482	T-SHIRTS, KNITTED, COTTON	NO	47,004	12,516			78482
78485	SHIRTS, SWEATSHIRTS, KNIT. COT. NES	NO			998	995	78485
78499	OUTERWEAR, KNITTED N E S	NO			140	330	78499
78524	HOSIERY, MENS & BOYS MAN-MADE FIBRE	DZ PR			1,100	1,683	78524
78639	HEADSQUARES AND KERCHIEFS	DOZ	2,082	24,707	3,864	38,323	78639
78649	HEADWEAR N E S	DOZ	2	232			78649
78680	GLOVES AND MITTENS, LEATHER	DZ PR			8	112	78680
78809	FUR GOODS, APPAREL	NO			230	914	78809
78902	HANDKERCHIEFS, COTTON	DOZ	30,200	15,201	43,550	24,373	78902
78912	NECKTIES	DOZ	166	2,350	1,045	18,066	78912
78952	WOMENS HANDBAGS AND PURSES	DOZ	69	1,595	253	4,626	78952
78999	APPAREL ACCESSORIES N E S			7,750		6,388	78999
79012	BOOTS & SHOES MENS & BOYS LAST-MADE	PAIR	24,251	31,822	55,443	88,099	79012
79014	BOOTS SHOES WOMEN & GIRLS LAST-MADE	PAIR	197,652	232,507	245,379	301,206	79014
79016	BOOTS SHOES CHILD INFANTS LAST-MADE	PAIR	104,679	93,965	175,749	175,822	79016
79039	SLIPPERS AND HOUSE FOOTWEAR	PAIR	737	1,166	6,433	8,698	79039
79040	WATERPROOF RUBBER FOOTWEAR	PAIR			46,641	40,388	79040
79046	UTILITY FOOTWEAR, FABRIC TOPS	PAIR	1,324,520	462,907	816,133	274,318	79046
79049	RUBBER AND PLASTIC FOOTWEAR N E S	PAIR	1,764	828	2,880	2,489	79049
79099	FOOTWEAR N E S	PAIR			982	3,406	79099
80019	PERFUMES TOILET WATERS AND COLOGNES			744		1,228	80019
80049	TOILET PREPARATIONS & COSMETICS NES					142	80049
80061	TOILET SOAP	LB	6,326	2,911	5,664	2,778	80061
81017	JEWELLERY OF PRECIOUS METALS			25,990		14,300	81017
81022	ROSARIES & RELIG. COSTUME JEWELLERY					1,169	81022
81027	COSTUME JEWELLERY N E S			41,068		72,461	81027
81033	PEARLS STRUNG PIERCED EXC NECKLACES			581		1,111	81033
81049	SILVERWARE AND GOLDWARE N E S			834		6,003	81049
82004	WRIST WATCHES	NO	100	538	100	538	82004
83247	TENNIS & BADMINTON EQUIP & PTS NES			14,386		16,316	83247
83262	BALLS FOR SPORTS AND GAMES N E S			3,086		11,121	83262
83289	SPORTING RECREATION EQUIP & PTS NES			9,140		13,504	83289
83709	GAMES AND ENTERTAINMENT EQUIP N E S			1,147		685	83709
83711	DOLLS			821		1,124	83711
83716	STUFFED ANIMALS			2,222		3,360	83716
83789	TOYS AND PARTS N E S			1,390		812	83789
84432	ORIENTAL RUGS, GENUINE	SQ FT	2,381,268	2,586,295	1,421,244	1,532,143	84432
84483	HEMP, JUTE & SISAL MATS AND MATTING	SQ FT	203,719	16,787	4,986	1,214	84483
84485	COCONUT FIBRE & COIR MATS & MATTING	SQ FT	2,565,040	298,490	1,993,831	225,337	84485
84499	CARPETS, RUGS, MATS AND RUNNERS NES			13,557		6,572	84499
84510	DRAPERIES & TAPESTRIES EXCEPT RUGS	LB			145	3,863	84510
84601	BEDSPREADS, TEXTILE	NO	5,591	11,371	18,577	35,628	84601
84633	BLANKETS OF COTTON	NO			3,625	2,371	84633
84643	SHEETS, BED, COTTON	NO			11,599	18,009	84643
84645	SHEETS, BED, N E S EXCEPT RUBBER	NO	22,354	22,220			84645
84650	PILLOW CASES, TEXTILE	NO	73,200	16,263			84650
84653	PILLOW CASES, COTTON	NO			225,120	43,401	84653
84711	TABLECLOTHS	LB	370	553	699	982	84711
84715	TABLE YAPKINS, TEXTILE	LB	23,699	13,439	7,760	5,224	84715
84739	TABLE DRESSER COVERS SCARFS ETC NES	LB	405	885	4,040	4,127	84739
84803	TOWELS, COTTON, TERRY	LB	291,185	206,751	245,435	169,285	84803
84805	TOWELS, COTTON N E S	LB	31,931	18,562	30,960	19,716	84805
84839	WASHCLOTHS, BATH MATS AND SETS	LB	4,509	3,502	6,925	5,749	84839
84916	CUSHION COVERS, TEXTILE			393			84916
84999	HOUSE FURNISHINGS AND SUPPLIES NES			1,849		7,833	84999
85011	COOKING UTENSILS, STAINLESS, & PTS			3,158			85011
85013	COOK. UTENSILS VITREOUS ENAMEL & PT					141	85013
85019	COOKING UTENSILS AND PARTS N E S			498		1,416	85019
85039	FOOD PREP. AND STORAGE UTENSILS NES			452			85039
85049	KITCHEN TOOLS & HAND APPL & PTS NES			174			85049
85052	TABLE KNIVES FORKS SPOONS STAINLESS	DOZ	14,914	15,334	18,943	13,540	85052
85059	KITCHEN AND TABLE CUTLERY N E S			6,511		9,145	85059
85062	TABLEWARE, CERAMIC			121			85062
85068	TABLEWARE, PLASTIC			220			85068
85069	TABLEWARE N E S			8,185		33,201	85069
86209	SEWING MACHINES, DOMESTIC	NO	3,200	37,509	1,147	17,310	86209
86499	LUGGAGE N E S			262		126	86499
86532	COMBS			3,304		3,358	86532
86612	SMOKERS PIPES	DOZ	717	4,174	1,957	15,358	86612
86640	SMOKERS ACCESSORIES N E S			5,529		5,124	86640



C O U N T R Y	COUNTRY AND COMMODITY	JANUARY TO DECEMBER 1969		JANUARY TO DECEMBER 1970		C O U N T R Y
		QUANTITY	VALUE \$	QUANTITY	VALUE \$	
86712	TRAYS		2,040		4,307	86712
86716	HOLID BASKETS BOXES CANS & BAGS NES		8,241		9,513	86716
86720	CURTAIN AND DRAPERY ROLLS, RODS ETC		2,259			86720
87724	FIREPLACE FIXTURES, EQUIPMENT & PTS		16,517			87724
86730	ART AND DECORATIVE WARE, GLASS				1,215	86730
86732	ART AND DECORATIVE WARE N E S		234,439		249,568	86732
86799	HOUSEHOLD & PERSONAL EQUIP & PT NES		13,744		16,043	86799
87299	ANTIBIOTICS N E S		4,754			87299
87999	MEDICINAL & PHARMACEUTICAL PROD NES		3,550		474	87999
88204	ARTIFICIAL TEETH, DENTURES AND PTS		366			88204
88312	SPECTACLE AND EYEGLASS FRAMES	NO	495			88312
89304	RELIGIOUS BOOKS AND PAMPHLETS	900			1,272	89304
89341	BOOKS AND PAMPHLETS NES EXC ENGLISH		3,007			89341
89349	BOOKS AND PAMPHLETS N E S		7,062		4,726	89349
89424	GREETING CARDS		1,976		130	89424
89439	PICTURE REPRODUCTIONS N E S				1,002	89439
89581	TOURIST LITERATURE		10,093		20,214	89581
89589	ADVERTISING MATTER PRINTED N E S		754		504	89589
90204	BALL POINT PENS	DOZ	1,713	125	361	90204
90280	PENCIL LEADS		508		476	90280
90489	DESK ACCESS. & OFFICE DEVICES & PTS		1,138		707	90489
91208	PROJECTORS, MOTION PICTURE	NO		1	278	91208
91813	MOTION PICTURE FILM, 35MM, EXPOSED FT	51,107	10,344	78,613	6,450	91813
92152	WIND INSTRUMENTS AND PARTS N E S	NO	15,100	9,062	985	92152
92164	STRINGS FOR MUSICAL INSTRUMENTS NES		261			92164
92165	STRINGED INSTRUMENTS AND PARTS NES	NO	415	355	5,725	92165
92199	MUSICAL INSTRUMENTS AND PARTS N E S		475		1,748	92199
93006	RIFLES, CENTREFIRE, NON-MILITARY	NO		4	980	93006
93099	MILITARY WEAPONS, ORDNANCE & PT NES				473	93099
94604	DRAWINGS, ETCHINGS & ENGRAVING ORIG	NO	5	24	181	94604
94608	PAINTINGS AND PASTELS, MADE BY HAND	NO	41	251	8,659	94608
94620	SCULPTURES AND STATUES, ORIGINAL	NO	4	4	313	94620
94630	ANTIQUES AT LEAST 100 YEARS OLD NES		3,002		3,744	94630
94640	COLLECTIONS & COLLECTORS ITEMS NES		21,408		28,184	94640
94915	PREFABRICATED STRUCTURES & PTS NES				20,321	94915
94929	SIGNS AND ADVERTISING DISPLAYS NES		212			94929
94966	NON-ELEC LIGHTING FIXTURES & PT NES		6,987		13,060	94966
94968	JEWELLERY CASES		3,766		1,969	94968
94975	WIGS, HAIRFALLS & SIM. HAIR PROD.				729	94975
94995	NOVELTIES AND ART GOODS N E S		19,660		4,670	94995
94999	MISCELLANEOUS END PRODUCTS N E S		46,815		64,145	94999
95029	SHIPPING CONTAINERS METAL & PTS NES		370			95029
96104	SADDLERY, HARNESS, WHIPS AND PARTS		637		1,267	96104
96159	TEXTILE END PRODUCTS N E S		6,404		4,435	96159
96168	BELLS, CHIMES AND GONGS N E S		12,426		19,684	96168
96174	GLASS MIRRORS		320		1,999	96174
97010	IMPORT PACKING, RE-USABLE NOT DESCR		1,637		3,639	97010
97030	GOODS RETURNED WITHIN FIVE YEARS		5,824		166,855	97030
97075	SHIPMENTS OF LESS THAN \$200.00 EACH		171,923		201,897	97075
			40,905,449		39,820,943	

SOURCE: Statistics Canada, 1969 - 1970





Table II

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CANADIAN EXPORTS TO INDIA BY COMMODITIES

CLASS	COUNTRY AND COMMODITY	JANUARY TO DECEMBER 1969		JANUARY TO DECEMBER 1970		CLASS
		QUANTITY	VALUE IN DOLLARS	QUANTITY	VALUE IN DOLLARS	
	INDIA					
110	CATTLE, DAIRY, PUREBRED	NO	42			110
630	BABY CHICKS	NO	1,413			630
4440	SALMON, CHUM, CANNED	CWT N		3,815	26,049	4440
4442	SALMON, PINK, CANNED	CWT N	24	13	852	4442
5152	MILK POWDER, SKIM MILK	CWT	43,500	32	2,373	5152
6169	WHEAT, EXCEPT SEED N E S	CWT	12,929,305	3,367	37,522	6169
6269	WHEAT FLOUR N E S	CWT	289	14,643,562	44,780,484	6269
7899	FRUITS AND PRODUCTS, CANNED N E S	LB N		200	1,020	7899
9805	ASPARAGUS, CANNED	LB N		150	130	9805
14410	GELATIN, EDIBLE	LB		198	127	14410
14699	FOOD PREPARATIONS N E S	LB	500	46	294	14699
17320	GIN	P GAL		2,420	930	17320
17340	WHISKY	P GAL	143	90	360	17340
17399	DISTILLED BEVERAGES AND SPIRITS NES	P GAL		469	3,959	17399
20999	CRUDE ANIMAL AND FISH PROD INED NES			21	128	20999
21240	RAPESEED	CWT		390	1,338	21240
25330	COPPER SCRAP	CWT	4,665	321,440	1,727,897	25330
25350	BRASS AND BRONZE SCRAP	CWT	14	1,073	76,889	25350
25390	COPPER ALLOY SCRAP N E S	CWT	31			25390
25410	LEAD IN ORES AND CONCENTRATES	CWT	2,584	6,675	103,500	25410
25530	NICKEL IN OXIDE	CWT	49			25530
25540	NICKEL AND NICKEL ALLOY SCRAP	CWT	5,197	2,788	693,619	25540
25710	ZINC IN ORES AND CONCENTRATES	CWT	116,083	2,788	2,009,935	25710
25950	MOLYBDENUM IN ORES, CONC. & SCRAP	CWT	448	3,326	752,363	25950
26169	COAL	TUN	500	188	11,375	26169
27120	ASBESTOS MILLED FIBRES, GROUP 3 GR.	TON	655	1,806	766,034	27120
27130	ASBESTOS MILLED FIBRES, GROUP 4 & 5	TON	13,967	19,950	3,965,583	27130
27140	ASBESTOS SHORTS, GROUP 6-9 GRADES	TON	1,319	2,377	196,631	27140
27977	SULPHUR, CRUDE OR REFINED N E S	TON	241,703	383,017	6,284,809	27977
27999	NON-METALLIC MINERALS, CRUDE N E S				2,450	27999
29119	TEXTILE RAGS N E S	CWT	288	6,173	65,533	29119
32099	RUBBER FABRICATED MATERIALS N E S	LB	1,850	394	1,527	32099
33133	LUMBER, WESTERN RED CEDAR	M B F	2			33133
33609	DOORS OF WOOD	NO		1	650	33609
34019	WOOD PULP DISSOLVNG & SPECIAL ALPHA	CWT	56,002	174,561	1,490,104	34019
34025	WOOD PULP BL. SULPHITE PAPER GRADES	CWT	356	22,046	213,723	34025
35109	NEWSPRINT PAPER	CWT	1,437,757	8,518,942	1,772,549	35109
35249	WRITING AND REPRODUCTION PAPER	CWT			860	35249
35399	SANITARY PAPER	CWT	104	1,087	4,749	35399
37399	BROAD WOVEN FABRICS, COTTON N E S	LB	30	164		37399
37519	RAYON BROAD WOVEN FABRICS	LB			61	37519
37599	BROAD WOV FAB, 1 MAN-MADE FIBRE NES	LB	444	922	293	37599
37679	BROAD WOVEN FABRICS, MIXED FIBRES	LB	219	575		37679
38176	PAPERMAKERS FELTS, TEXTILE	LB	9,378	57,406	7,020	38176
38199	SPECIAL CONSTRUCTION FABRICS N E S	LB	221	523	1,123	38199
38499	COATED, IMPREGNATED FABRICS N E S	LB			42	38499
38999	TEXTILE FABRICATED MATERIALS N E S			659	101	38999
39899	GUM, WOOD & VEGETABLE EXTRACTS NES	LB				39899
40037	SELENIUM	CWT	35	938,900	87,955	40037
40061	CALCIUM METAL	CWT	115	17	5,823	40061
40099	CHEMICAL ELEMENTS N E S	CWT	4,903	120,849	347,442	40099
40199	INORGANIC ACIDS & OXYGEN COMPODS NES	CWT	1	162	36,000	40199
40299	INORG. BASES & METALLIC OXIDES NES	CWT			43,220	40299
40499	METALLIC SALTS OF INORG. ACIDS NES	CWT	24,163	290,781	680,152	40499
40535	RADIOACTIVE ELEMENTS AND ISOTOPES			37,580	321	40535



CLASS	COUNTRY AND COMMODITY	JANUARY TO DECEMBER 1969		JANUARY TO DECEMBER 1970		CLASS	
		QUANTITY	VALUE IN DOLLARS	QUANTITY	VALUE IN DOLLARS		
40599	INORGANIC CHEMICALS N E S				3,645	40599	
41419	HYDROCARBONS AND THEIR DERIVATIVES	CWT		38	2,496	41419	
41429	ALCOHOLS AND THEIR DERIVATIVES	CWT	384	111	2,243	41429	
41449	ORGANIC ACIDS, ANHYDRIDES AND DERIV	CWT	2	112		41449	
41459	NITROGEN-FUNCTION COMPOUNDS N E S	CWT		74	810	41459	
41631	URFA	CWT		827,332	2,763,567	41631	
41645	NITROGEN SOLUTIONS	CWT		2,909,755		41645	
41647	NITROGEN-PHOSPHATE FERTILIZERS NES	CWT		1,380,961	265,928	41647	
41648	AMMONIUM SULPHATE	CWT		2,311,776	557,334	41648	
41652	POTASSIUM CHLORIDE, MURIATE	CWT		697,387	2,826,810	41652	
41689	PREPARED FERTILIZER MIXTURES	CWT			1,845,313	41689	
42199	ADHESIVES N E S	LB	3,760	1,992	3,155	42199	
42416	POLYETHYLENE RESINS, NOT SHAPED	CWT	6	306		42416	
42499	PLASTIC & SYN RUBBER NOT SHAPED NES	CWT		87,497	73,453	42499	
42509	PLASTIC FILM AND SHEET	CWT	17	690		42509	
42549	LAMINATED PLASTICS MATERIALS	CWT		5	310	42549	
42599	PLASTICS FABRICATED MATERIALS N E S	CWT	49	2,606	74	2,876	42599
42835	READY-MIXED PAINTS, INCL WHITE LEAD	GAL	1,052	9,494	395	4,558	42835
42899	STAINS, LACQUERS & RELATED PROD NES			7,015			42899
42999	INDUS. CHEM SPECIALTIES & EXPLOSIVE	CWT		25,190	214	13,225	42999
44139	FERROSILICON	TON			61	25,500	44139
44199	FERRO-ALLOYS N E S	TON	7	4,541	180	846,934	44199
44399	FORGINGS, STEEL N E S	CWT	59	5,066	25	3,901	44399
44430	BAR, STEEL, HOT ROLLED	CWT	1,707	36,004	9,735	216,254	44430
44450	WIRE RODS, STEEL, HOT ROLLED	CWT			3,486	74,958	44450
44480	BAR, STEEL, COLD ROLLED	CWT	7	400	18	1,391	44480
44499	BAR AND RODS, STEEL, FABRICATED	CWT			68	6,574	44499
44520	PLATE, STEEL	CWT	7,474	82,972	37,971	540,341	44520
44530	SHEET & STRIP CARB STEEL HOT ROLLED	CWT			42	652	44530
44599	SHEET AND STRIP, STEEL N E S	CWT	573	11,492	797	21,561	44599
44706	STRUCTURAL SHAPES AND SHEET PILING	CWT	429	6,810	1	106	44706
44859	PIPES & TUBES, IRON & STEEL, WELDED	CWT	36	4,396	906	12,405	44859
44899	PIPES AND TUBES, IRON AND STEEL NES	CWT	2,834	111,745	204,559	1,792,992	44899
44949	WIRE ROPE AND MULTIPLE WIRE STRAND	CWT			40	544	44949
44959	WIRE N E S	CWT	11	1,542	49	9,283	44959
45109	ALUMINUM PIGS INGOTS SHOT SLABS ETC	CWT	26,470	730,667	30,307	787,805	45109
45129	ALUMINUM BAR ROD PLATE SHEET CIRCLE	CWT	1	136	1,059	30,732	45129
45149	ALUMINUM FABRICATED MATERIALS N E S	CWT	13	1,933	339	53,204	45149
45204	COPPER, REFINERY SHAPES	CWT	58,951	3,874,917	83,879	6,654,514	45204
45208	COPPER BARS, RODS AND SHAPES N E S	CWT	2,801	161,067			45208
45215	COPPER PIPE AND TUBING	CWT	252	26,063	213	17,563	45215
45218	COPPER WIRE & CABLE, EXC. INSULATED	CWT	1	133	1,311	80,550	45218
45279	COPPER ALLOY SHAPES AND SECTIONS	CWT	302	37,333	541	40,018	45279
45285	COPPER ALLOY PIPE AND TUBING	CWT	1,235	276,325			45285
45299	COPPER & ALLOY FABRICATED MAT. NES	CWT	3	313			45299
45309	LEAD PIGS, BLOCKS AND SHOT	CWT	74,670	900,306	378,183	5,088,103	45309
45415	NICKEL ANODES CATHODES INGOTS RODS	CWT	11,054	1,208,273	38,684	7,498,690	45415
45499	NICKEL & ALLOY FABRICATED MAT. NES	CWT	2,740	291,485	2,094	493,413	45499
45708	ZINC BLOCKS, PIGS AND SLABS	CWT	124,268	1,252,903	577,181	6,369,065	45708
45749	ZINC FABRICATED MATERIALS N E S	CWT	17	1,050	2,301	41,142	45749
45925	CADMIUM	LB	5	116	2	61	45925
45935	COBALT	LB	1,272	2,592	1,862	4,722	45935
45945	MAGNESIUM	LB		30,050	14,151	4,962	45945
45979	NON-FERROUS METALS N E S	LB	1,229	6,005	33	530	45979
45999	NON-FERROUS METAL ALLOYS N E S	LB			4,913	2,536	45999
46352	WIRE CLOTH & WOV WIRE SCREENING NES	CWT	9	754	5	455	46352
46529	NUTS, BOLTS, SCREWS AND WASHERS	CWT	1,930	30,359	77	8,298	46529
46559	LOCKS, KEYS AND PARTS			2,164		698	46559
46599	BASIC HARDWARE N E S			12,544		7,893	46599
46819	VALVES, IRON OR STEEL			282,680		411,547	46819
46849	VALVES N E S			86,802		67,928	46849
46860	PIPE FITTINGS, IRON OR STEEL	CWT	326	76,397	535	71,537	46860
46899	PIPE FITTINGS N E S	CWT	98	7,201	15	806	46899
46965	STRUCT. & ARCHITECTURAL METAL PROD.					44,542	46965
46975	INSULATED WIRE AND CABLE	CWT	7,855	212,772	2,645	104,910	46975
46980	WELDING WIRE RODS ELECTRODES SOLDER	CWT	68	9,917	208	13,060	46980
46999	METAL FABRICATED BASIC PRODUCTS NES			16,080		11,233	46999
47262	FIRE BRICK AND SIMILAR SHAPES			2,544			47262
47399	GLASS BASIC PRODUCTS N E S			230		426	47399
47499	ASBESTOS BASIC PRODUCTS N E S			2,982		6,593	47499
47659	ABRASIVE WHEELS AND STONES					23,356	47659
47699	ABRASIVE BASIC PRODUCTS N E S			3,225		16,774	47699
47929	CARBONS AND CARBON ELECTRODES			433,585		129,465	47929
47989	GEM AND ORNAMENTAL STONES N E S			1,369		448	47989
47999	NON-METALLIC MINERAL BASIC PROD NES			21,370		1,308	47999
49510	HIGH TENSION INSULATORS & FITTINGS			425			49510
49599	NON-CURRENT-CARRYING WIRING MAT NES			2,520		1,295	49599
49652	GASKETS, EXCEPT RUBBER AND ASBESTOS			999		2,509	49652
49660	HOSE AND HOSE COUPLINGS			5,579		455	49660
49699	FABRICATED MATERIALS N E S			181		1,217	49699
50239	HYDRAULIC TURBINES AND PARTS					63,970	50239
50299	ENGINES, TURBINES AND PARTS N E S			3,786,214		3,231,159	50299
50319	GENERATORS AND PARTS	NO	4	462,259	1	31,257	50319
50369	ELECTRIC MOTORS	NO	11	1,533	43	166,903	50369
50379	PARTS & ACCESS. FOR ELEC MOTORS NES					5,524	50379



CLASS	COUNTRY AND COMMODITY	JANUARY TO DECEMBER 1969		JANUARY TO DECEMBER 1970		CLASS
		QUANTITY	VALUE IN DOLLARS	QUANTITY	VALUE IN DOLLARS	
50439	BEARINGS AND PARTS		614		87,376	50439
50499	POWER TRANSMISSION EQUIP & PTS N E S		40,861		24,416	50499
50739	AIR AND GAS COMPRESSORS AND PARTS		17,651		10,760	50739
50799	VACUUM PUMPS, FANS, BLOWERS & PARTS		16,508		9,450	50799
50901	POWER BOILERS, EQUIPMENT AND PARTS		91,390		24,197	50901
50959	INDUS. FURNACES, KILNS, OVENS & PTS		23,328		1,360	50959
50969	FOUNDRY EQUIPMENT AND PARTS N E S		66,835			50969
50980	PUMPS, PUMPING SYSTEMS AND PARTS		168,478		153,174	50980
50999	GEN. PURPOSE INDUS. MACHY & PTS NES		75,756		62,262	50999
51039	HOISTING MACHINERY AND PARTS N E S	NO	152,173			51039
51199	CONVEYORS CONVEYING SYSTEMS & PARTS	5	2,620			51199
51327	INDUSTRIAL HOISTS AND LIFTS	NO		6	4,179	51327
51399	HOISTING MACHINERY AND PARTS N E S				2,645	51399
51999	MATERIALS HANDLING EQUIP. & PTS NES		16,199		14,537	51999
52119	ROCK DRILLING & RELATED MACHY & PTS		26,655		25,744	52119
52139	EXCAVATING, CREDDING EQUIP. & PARTS		14,194			52139
52199	MINING-QUARRYING MACHY & PARTS NES		419,991		121,182	52199
52303	METAL BORING DRILLING MACHY & PARTS	NO	4,250			52303
52315	PRESSES, METALWORKING AND PARTS	NO			425	52315
52329	MACHINE TOOLS METALWORK. & PTS NES		14,623		2,282	52329
52349	WELDING APPARATUS, EQUIPMENT & PTS		97,591		39,642	52349
52396	CUTTING TOOLS FOR METALWORK. MACHY.		10,342		6,024	52396
52399	METALWORKING MACHY, EQUIP & PTS NES		9,368		899,193	52399
52909	RUBBER WORKING MACHY, EQUIP & PARTS		4,281		6,743	52909
52924	SHOE-MAKING INDUSTRY MACHY & PARTS		2,463		1,708	52924
52929	CONSTRUCTION MAINTENANCE MACHY & PT		63,292		56,079	52929
52936	CHEMICAL PHARM PROD MACHY AND PARTS		461			52936
52959	PULP & PAPER INDUS. MACHY AND PARTS		1,787		5,743	52959
52969	PRINTING & BOOKBINDING MACHY & PTS		943		578	52969
52979	TEXTILE INDUSTRIES MACHY AND PARTS		762		7,393	52979
52986	FOOD & BEVERAGE MACHINERY & PTS NES		123,797		615	52986
52999	SPECIAL INDUSTRY MACHY & PARTS NES		115,313		39,670	52999
54329	HAYING MACHINERY AND PARTS N E S	NO	1,826			54329
57029	LOCOMOTIVES & TENDERS, ENGINES & PT	NO	4,119,628	1	123,934	57029
57099	RAILWAY, STREET ROLL STOCK & PT NES	NO	1,160,427		923,690	57099
58110	HARDTOP SEDANS, NEW	NO	9,545	1	3,704	58110
58126	SEDANS, NEW N E S	NO	8,350	1	2,743	58126
58133	STATION WAGONS, NEW	NO	2,200			58133
58339	TRUCKS AND CHASSIS, COMMERCIAL NES	NO	26,716	1	36,180	58339
58499	TRAILERS & COMMERCIAL SEMI-TRAILERS	NO	15,640			58499
58799	MOTOR VEHICLES N E S	NO		1	120	58799
58895	MOTOR VEHICLE ENGINES AND PARTS	NO			850	58895
58999	PARTS & ACCESS. FOR MOTOR VEH. NES		59,042		36,203	58999
59029	MARINE ENGINES AND PARTS	NO			1,201	59029
59039	PTS & ACCESS. FOR SHIPS & BOATS NES		746		9,140	59039
60039	AIRCRAFT ENGINES AND PARTS	NO	602,475		855,278	60039
60099	AIRCRAFT ASSEMBLIES EQUIP & PTS NES		148,283		165,551	60099
62105	PASSENGER CAR TIRES, PNEUMATIC, NEW	NO	376			62105
62109	TRUCK AND BUS TIRES, PNEUMATIC, NEW	NO		32	2,302	62109
62525	PASSENGER CAR TIRE TUBES	NO	52			62525
63419	TELEPHONE APPARATUS EQUIP AND PARTS		74,403		10,454	63419
63429	TELEGRAPH APPARATUS EQUIP AND PARTS		289			63429
63445	SOUND AMPLIFIERS, EXCLUDING PARTS				807	63445
63490	RADIO TRANSMITTING-RECEIVING UNITS		218,472		84,070	63490
63495	RADIO TV BROADCAST TRANSN EQUIP NES		7,302		14,409	63495
63499	COMMERCIAL COMMUNICATION EQUIP NES		642,217		116,072	63499
63720	TV RECEIVING SETS, EXC. COMBINATION	NO	500			63720
63770	COMB RECEIVING SETS & RECORD PLAYER	NO		2	596	63770
63799	PHONOGRAPHS AND RECEIVING ANTENNAE		13,599			63799
63915	RESISTORS, ELECTRONIC, AND PARTS				546	63915
63982	ELECTRONIC TUBES AND PARTS		81,889		19,151	63982
63984	SEMI-CONDUCTORS AND PARTS		2,480		1,239	63984
63998	ELECTRONIC EQUIPMENT COMPONENTS NES		89,195		87,713	63998
65029	WARM AIR CENTRAL HEATING EQUIPMENT		415			65029
65039	HEATING STOVES, SPACE WATER HEATERS		3,317		15,876	65039
65049	HEATING & FUEL BURN EQUIP & PTS NES		1,814			65049
65547	REFRIGERATORS & FREEZERS HHOLD SIZE	NO	63,088	3	741	65547
65549	PTS OF HHOLD REFRIGERATORS FREEZERS		200		138	65549
65570	COMMERCIAL REFRIGERATION EQUIPMENT		1,082			65570
65599	AIR CONDITN & REFRIG EQUIP & PT NES		14,310		12,936	65599
66015	COOKING STOVES RANGES OVENS ELEC PT		153			66015
66099	NON-ELECTRIC EQUIP FOR COOKING & PT		153			66099
68019	ELECTRIC LIGHTING FIXTURES & PARTS		11,372		37,890	68019
68028	ELECTRIC LAMPS, BULBS & TUBES & PTS		368		2,582	68028
68039	TRANSFORMERS AND PARTS		178,448		50,989	68039
68045	CIRCUIT BREAKERS AND PARTS		14,689		69,078	68045
68049	SWITCHGEAR & PROTECT EQUIP & PT NES		156,467		931,755	68049
68059	INDUSTRIAL CONTROL EQUIPMENT & PTS		314,980		95,531	68059
68069	WIRING DEVICES AND PARTS		8,528		31,787	68069
68079	CONVERTER EQUIPMENT AND PARTS		65,089		100	68079
68095	SPARK PLUGS AND PARTS		196			68095
68099	ELEC EQUIP FOR INT COMBUST ENG & PT		3,733		3,525	68099
69796	PARTS & SUPPLIES FOR BATTERIES NES		203			69796
69799	ELECTRICAL EQUIP APPL AND PARTS NES		4,902		778	69799
69809	WASHING MACH ELECTRIC DOMESTIC SIZE	NO	126	1		69809





CLASS	COUNTRY AND COMMODITY	JANUARY TO DECEMBER 1969		JANUARY TO DECEMBER 1970		CLASS
		QUANTITY	VALUE IN DOLLARS	QUANTITY	VALUE IN DOLLARS	
69899	LAUNDRY EQUIPMENT DOMESTIC & PT NES		542		420	69899
70009	X-RAY AND RELATED EQUIPMENT & PARTS		211,815		147,668	70009
70019	NAVIGATION INSTRUMENTS APPAR. & PTS		1,815		1,743	70019
70029	ELECTRICITY-MEASURING INSTR & PARTS		34,813		13,457	70029
70069	MEDICAL & REL. INSTR EQUIP & PT NES		20,151		31,192	70069
70079	LAB. OPTICAL INSTR. EQUIP & PTS NES		96,476		206,550	70079
70099	MEASURING & TESTING EQUIP & PTS NES		589,547		270,825	70099
74012	FURNITURE, WOODEN, HHOLD, NOT UPHOL		3,397			74012
74014	FURNITURE, METAL, HHOLD, NOT UPHOL		400			74014
74029	OFFICE FURNITURE N E S		1,492		153	74029
74099	FURNITURE AND FIXTURES N E S		5,982			74099
75019	POWER DRIVEN HAND TOOLS AND PARTS		5,458		755	75019
75020	FILES AND RASPS	DOZ	16,161	300	1,000	75020
75059	HAND TOOLS N E S, INCLUDING SETS		2,897		8,082	75059
77121	CARD PUNCH SORT TAB COMPUTERS & PTS		72,689		103,473	77121
77148	TYPEWRITERS, ELECTRIC	NO		1	186	77148
77199	OFFICE MACHINES AND PARTS N E S		1,757		5,916	77199
77909	PLUMBING FIXTURES & PLUMBING BRASS		4,795		394	77909
77919	SAFETY & SANITATION EQUIPMENT & PTS		1,674		27,220	77919
77929	SERVICE INDUSTRY EQUIP & PARTS NES		2,272		1,222	77929
78399	OUTERWEAR, EXCEPT KNITTED N E S	NO		108	187	78399
78699	GLOVES AND MITTENS N E S	DZ PR		1	138	78699
78809	FUR GOODS, APPAREL		776		593	78809
78874	SPEC. INDUS CLOTHING, RUBBER, PLAST		100			78874
78999	APPAREL ACCESSORIES N E S		119			78999
81029	JEWELLERY AND COSTUME JEWELLERY NES		246			81029
82029	CLOCKS, CLOCK MOVEMENTS & PARTS NES	NO		3	309	82029
82099	SPECIAL TIME RECORDERS AND PARTS		160			82099
83079	GAMES, TOYS, CHILDRENS VEH & PT NES		835			83079
84039	CARPETS MATS, SIMIL. FLOOR COVERING				100	84039
84065	BEDSPREADS COMFORTERS QUILT BLANKET		854			84065
85049	KITCHEN UTENSILS & PTS NES, COOKING		173			85049
85069	TABLEWARE N E S		541			85069
86099	HOUSEHOLD & PERSONAL EQUIP & PT NES		321		983	86099
87019	BIOLOGICAL PRODUCTS FOR HUMANS		1,860		5,511	87019
87089	VETERINARY MEDICINE FEED SUPPLEMENT				442	87089
87099	MEDICINAL & PHARMACEUTICAL PROD NES		3,203		332	87099
88029	SURGICAL MEDICAL & DENTAL SUPPL NES		144		225	88029
88039	OPHTHALMIC GOODS N E S		600			88039
88069	HEARING AIDS ORTHOPAEDIC APPL & PTS				396	88069
89029	NEWSPAPERS, MAGAZINES & PERIODICALS				500	89029
89039	BOOKS AND PAMPHLETS		12,050		33,998	89039
89049	MAPS PICTURES GREETING CARDS MUSIC		200		102	89049
89090	ADVERTISING MATTER PRINTED N E S		735		550	89090
89099	PRINTED MATTER N E S		6,616		6,961	89099
90019	STATIONERY & PAPER OFFICE SUPPL NES		416		958	90019
90029	WRITING & DRAUGHTING INSTR & PT NES		275			90029
90099	STATIONERS AND OFFICE SUPPLIES NES		562		1,197	90099
91059	PHOTO FILM & PLATES, UNEXPOSED NES		3,750		7,440	91059
91085	MOTION PICTURE FILM, SOLD, EXPOSED	FT	1,828			91085
91099	PHOTOGRAPHIC EQUIP. & SUPPLIES NES		91,444		2,508	91099
92199	MUSICAL INSTRUMENTS AND PARTS N E S				100	92199
93019	AMMUNITION, NON-MILITARY USE & PTS				827	93019
93099	MILITARY WEAPONS, ORDNANCE & PT NES		2,022		98,621	93099
94149	PREFAB. BLDG., STRUCTURES & PTS NES		195,554		14,375	94149
94629	WORKS OF ART				1,283	94629
94949	BUTTONS, NEEDLES PINS NOTIONS & PTS				322	94949
94995	NOVELTIES AND ART GOODS N E S		481		535	94995
95029	SHIPPING CONTAINERS, METAL, & PARTS				920	95029
95049	SHIPPING CONTAINERS PAPER & PTS NES		192			95049
97010	EXPORT PACKING, RE-USABLE OR UNCLAS				75	97010
97020	CONTRACTORS EQUIPMENT AND TOOLS		13,029		4,258	97020
97075	SHIPMENTS OF LESS THAN \$100.00 EACH		30,605		26,101	97075
COUNTRY TOTAL			95,551,583		129,842,388	

SOURCE: Statistics Canada 1969 - 1970



TABLE III

Ontario Domestic Exports to India

By Commodities 1969 - 1970

<u>Commodities</u>	<u>Value \$000</u>	
	<u>1969</u>	<u>1970</u>
Cattle	5.0	
Poultry	17.1	26.0
Dairy Produce	8.0	
Fruits and Products, Canned		.1
Vegetables and Veg. Juices, Canned		.1
Materials for Food Preparations		.3
Other Foods		.3
Distilled Alcoholic Beverages		2.0
Copper in Ores, concentrates, scrap	1.2	
Nickel in Ores, Concentrates, scrap	9.6	
Coal	32.5	11.4
Other waste and scrap materials		50.4
Rubber Fabricated Materials	.9	1.3
Wood Pulp and Similar Pulp	3.6	
Paper for Printing	398.0	598.0
Fine Paper		4.7
Man-Made Fibre Broad Woven Fabrics	.2	
Other Fabrics		.1
Chemical Elements	17.9	
Other Inorganic Chemicals	36.7	3.6
Other Organic Chemicals		3.3
Fertilizers & Fertilizer Materials	223.5	
Adhesives	.1	
Plastics and Syn Rubber, Not Shaped	87.7	1,298.6
Plastics Basic Shapes and Forms		.1
Paints and Related Products	14.0	3.6
Indus. Chem. Specialties & Explosive	6.4	4.8
Ferro-Alloys	4.5	
Castings and Forgings		1.0
Bars and Rods, Steel	31.0	280.9
Plate, Sheet and Strip Steel	49.7	523.8
Pipes and Tubes, Iron and Steel	55.4	1,489.2
Wire and Wire Rope, Iron and Steel	.4	9.3
Aluminum, Including Alloys		7.3
Copper and Alloys	245.7	126.2
Lead, including, Alloys	47.9	
Nickel and Alloys	834.7	5,105.6
Zinc, Including Alloys		127.3
Other Non-Ferrous Metals and Alloys	2.7	3.0
Bolts, nuts, etc. and basic Hardware	6.9	4.9
Valves and Pipe Fittings	36.5	67.5
Other Metal Fabricated Basic Prod.	4.7	12.6
Abrasive Basic Products		24.6



Other Non-Metallic Mineral Products	9.1	129.5
Non-Current Carrying wiring mat.	.1	1.3
Other Fabricated Materials	4.1	3.4
Engines & Turbines, General Purpose	1,514.2	1,582.6'
Electric Generators and Motors	20.1	202.4
Mech. Power Transm. Equip. & Bearings	34.5	84.3
Compressors, Blowers & Vacuum Pumps	19.0	7.7
Other General Purpose Indus. Machy	122.3	177.0
Conveying, Elevating, Etc. Equipment	135.0	
Hoisting Machinery		6.8
Other Materials Handling Equipment		14.5
Drilling, Mining, Oil and Gas Machy	228.3	145.5
Metal Working Machinery	115.4	6.3
Other Special Industry Machinery	14.8	29.1
Haying, Harvesting & Related Machy.	1.8	
Railway and Street R.R. Rolling Stock	280.9	48.2
Passenger Automobile and Chassis	6.9	6.4
Other Road Motor Veh. Pts. & Access.	2.8	14.4
Ships and Boats		.6
Aircraft	155.2	175.9
Pneumatic Tires, New		2.3
Comm. & Indus. Communication Equip.	23.7	19.4
T.V. Radio Sets & Phonos, Domestic		.6
Electronic & Rel Equip Components	.8	8.7
Heating Equipment	3.7	8.2
Air Conditioning and Refrig. Equip.	76.2	12.3
Cooking Equipment for Food	.2	
Electric Lighting and Control Equip.	484.7	788.9
Other Electric Equip and Appliances	5.1	
Laundry Equipment, Domestic	.1	
Measuring, Laboratory, Etc. Equip.	409.3	531.6
Furniture and Fictures	7.4	.2
Hand Tools and Miscellaneous Cutlery	16.2	1.4
Office Machines and Equipment	72.7	108.2
Miscellaneous Equipment		26.6
Miscellaneous Apparel	.1	
Apparel Accessories	.1	
Jewellery and Silverware	.2	
Toys Games Sport and Recreation Equip.	.8	
House Furnishings and Supplies	.9	
Misc. Household and Personal Equip.	.3	.5
Medicial & Pharmaceutical Products	2.0	6.0
Medical Suppl. Ophthalmic Goods Etc.	.1	.2
Printed Matter	5.6	28.7
Stationers & Office Supplies & Mart	.4	.9
Photographic Goods	4.1	
Firearms, Ammunition and Ordnance		.4
PreFabricated Bldg. and Structures		8.1
Miscellaneous End Products		.9
Special Transactions - Trade	6.3	6.6
Total For 519 - India	5.968.5	13.988.3

Source: 1 Statistics For Canada  
2 Ontario Exports by Countries







